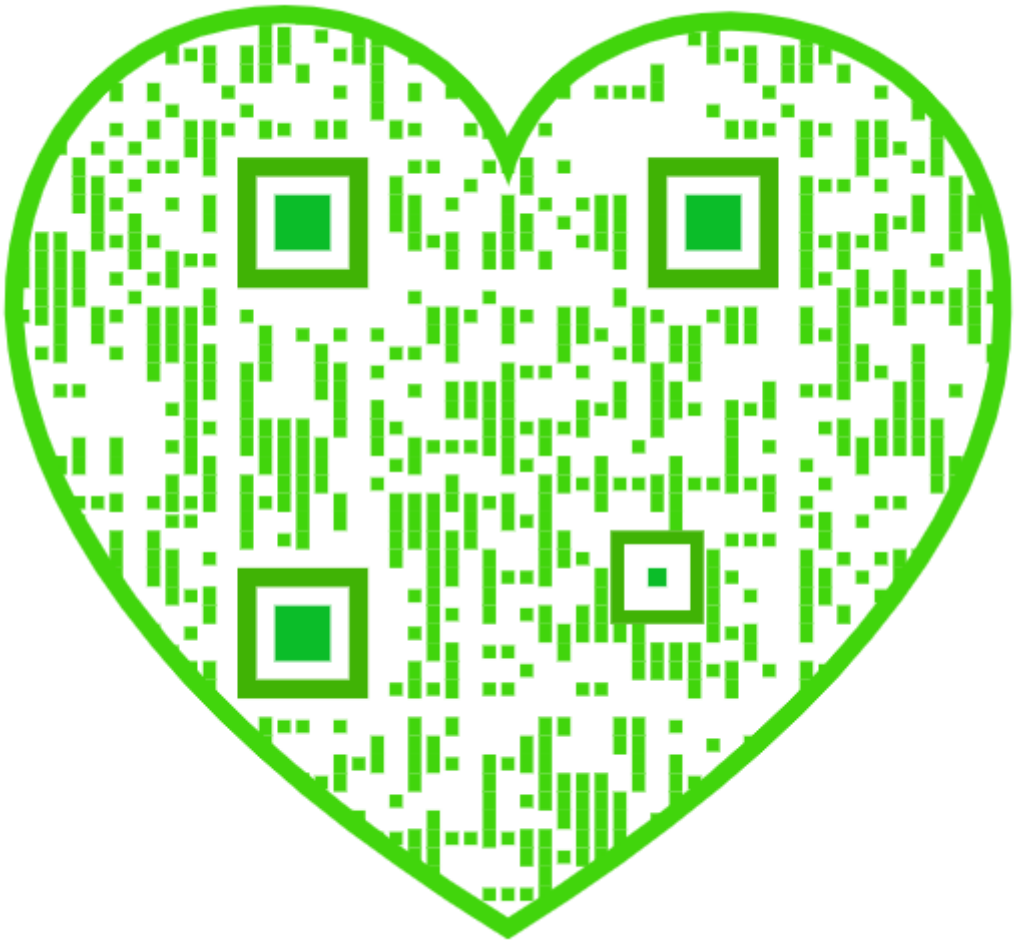

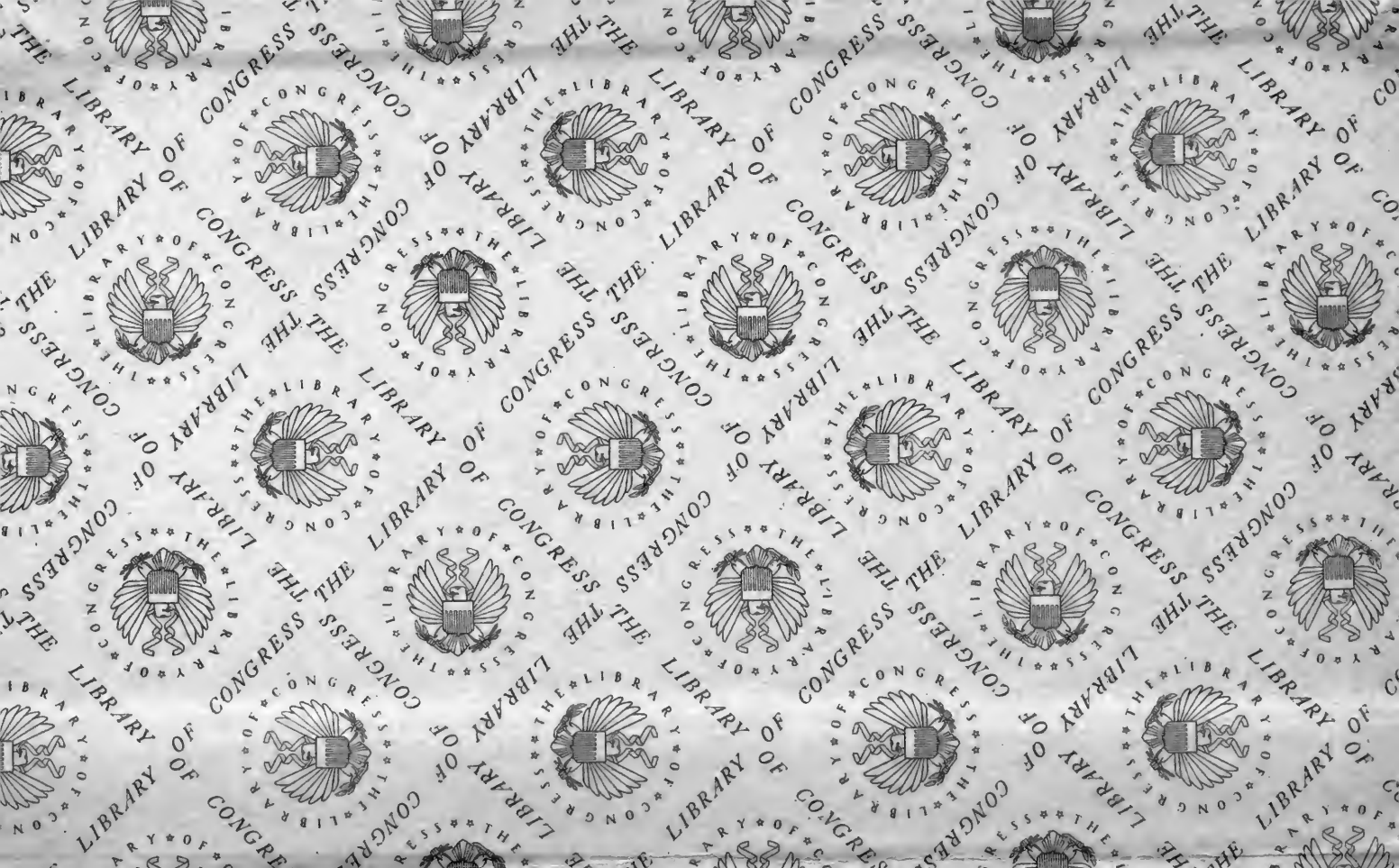
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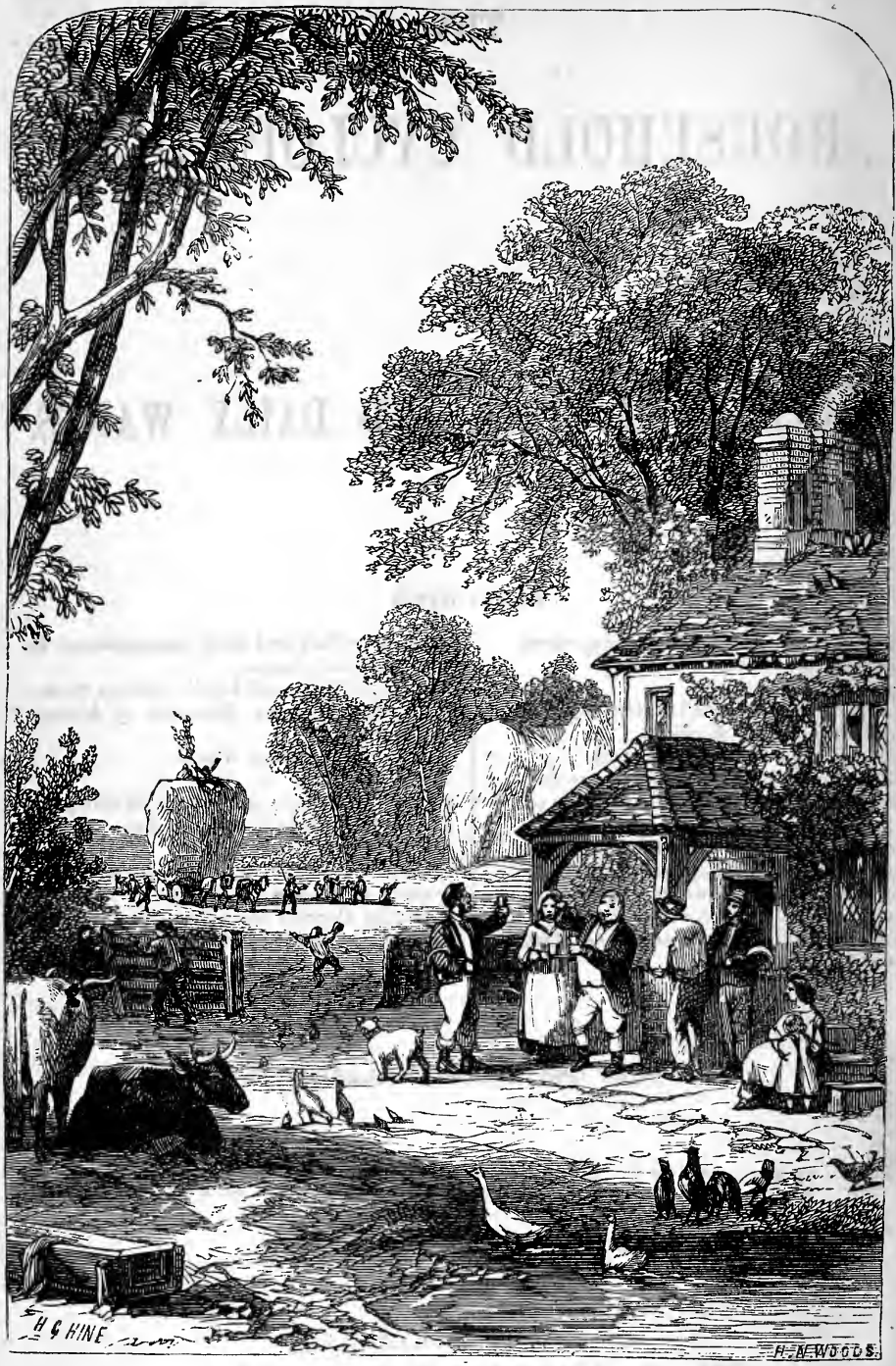

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THE

HOUSEHOLD CYCLOPÆDIA

OF

PRACTICAL RECEIPTS AND DAILY WANTS.

CONTAINING

Directions for Household Management.
Receipts for Domestic Cookery.
Sick Room Cookery.
The Detection of Adulterations in Food.
Practical Family Receipts.
Domestic Medicine and Surgery.
Clothing; how to choose and care for.
Forms of Contracts, Wills, and other Legal Papers.
How to obtain Patents and Copyrights.
The Rules and Principles of Business.
Tables of Weights and Measures.
Useful Social and Scientific Facts.
Indoor and Outdoor Games and Amusements.
Domestic Pets and their management in health and disease.
Domestic Pests and how to destroy them.
The Etiquette and Manners of Modern Society.
Ladies' Ornamental Work.
The Nursing of the Sick.
Counsel and Information for Mothers.
The Diseases of Childhood, their prevention and treatment.
Veterinary Medicine, Hygiene and Diseases of Domestic Animals.
Hints on Correct Speaking and Writing.
Something for Everybody, &c., &c.

WITH OVER ONE HUNDRED ILLUSTRATIONS.

BY ALEXANDER V. HAMILTON.

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PREFACE.

THE editor of this work has endeavoured to render it useful clear, and reliable in every department of which it treats. His object has been to make a practical manual to meet the wants of every household. He offers it therefore to the public as a Cyclopædia of complete and trustworthy information on everything pertaining to daily life.

The numerous *Cookery Receipts* have been actually tested, and hence bear the impress of real experience. Among them will be found receipts for many new articles of diet, and frequent hints for economy in the preparation of food.

In the sections devoted to the *Choice and Furnishing of a House,* the *Adulteration of Food, Domestic Chemistry,* and *Clothing,* the principles of household management and domestic economy are fully and distinctly stated. Important cautions and useful receipts are given which every one having to do with housekeeping will find of daily value.

The medical advice and prescriptions contained in the sections on *Domestic Medicine, Accidents and Injuries, Counsels for Mothers and Nurses,* and the *Diseases of Children,* are from the careful pen of an experienced physician. They form

a complete treatise on family medicine and surgery, and the rearing and management of children.

The departments on *Law* and on *Trade, Social and Scientific Facts,* contain information and bits of advice indispensable to every business man and woman.

Every lady will, after perusal, acknowledge the interest and value of the chapters on *Domestic Pets* and *Ladies' Work.*

Young people and often their elders will be pleased with the means of innocent diversion revealed in the chapter on *Games and their Rules,* and will be instructed by the sections on *Etiquette and Manners,* and *Correct Speaking and Writing.*

No farmer should be without the practical knowledge furnished in the section devoted to *Veterinary Medicine,* and the diseases of cattle and poultry.

Housekeepers know the annoyance they experience from *Domestic Pests* and will be glad to learn how to destroy them.

The editor, therefore, believes that not only the last, but every chapter of the book, will be found to contain

SOMETHING FOR EVERYBODY.

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ESCAPE FROM FIRE.

OUT-DOOR GAMES.

PET AND WATCH DOGS.

DOMESTIC POULTRY.

FLOWERS IN WOOL-WORK.

AMERICAN FISH.

I. HOUSEHOLD MANAGEMENT.

Choice of a House.—The first and most important requisite in domestic life is a house to live in.

You may either build, purchase, or rent a house. In the first case, there is some difficulty—the cost of building having considerably increased of late. But if you determine to *build*, settle first on the size and style of house you need. Then apply to a respectable architect and surveyor; tell him the extent of your family, number of servants, whether stables, conservatories, hothouses, &c., are wanted, and the limit of expense to which you intend to go. The architect will submit to you a rough draft of the proposed house and its estimated cost; approved of, the plan is elaborated. Finally you obtain separate plans for each story, with elevations for the principal fronts—all accurately and carefully drawn. The next matter is to find a suitable *locality*. Let your new vicinity be high and well drained. Carefully avoid the neighbourhood of graveyards, gasworks, canals, factories, water reservoirs, marshes, open ditches, slaughter houses, and chemical manufactories. Endeavour to obtain a *site* facing the south or south-east,—the very best being that site which has the diagonal line of its general plan north and south, so as to have the sun's rays on every window during some part of the day;—in other words, having no front or side pointing directly east, west, north or south. A gravel soil is preferable to all others, as it will not retain the water, and soon dries after rain. If you cultivate a garden you will soon discover the advantage of this. The direct or moderate slope is always a healthy site, and sure to be well drained. Before you conclude upon building, be careful to find that the water supply and drainage of the neighbourhood are thoroughly satisfactory. Good and plentiful water and complete drainage are absolutely essential to health and comfort. Procure next from a good builder a detailed estimate of his charges. If they are satisfactory, you may order the work to be proceeded with.

A Useful Caution. — Remember always to give the new house plenty of time to dry, and never on any account move in until you have reliable assurance that the walls and roof are perfectly set. Some very melancholy cases have occurred from persons living too soon in newly-built houses. Mould gets upon the furniture, and clothes and linen are constantly damp. This state of things rapidly renders the blood unhealthy, and the whole system becomes deranged. Dropsy, rheumatism, and in some cases paralysis, are brought on; the slightest wound or scratch speedily inflames, and existing complaints are greatly aggravated.

Purchasing or Renting of a house already built. These means of obtaining a house are certainly preferable when your circumstances render economy necessary. The mode of purchasing house property through Building Societies offers greater facilities for buying outright than for building. Your best plan is to get the lists of properties for sale issued by respectable house-agents, who have always a number of houses, more or less bargains, for disposal. In these lists may be found dwellings to suit the means and desires of all classes. You can then see them for yourself. If you consider the matter favourably, pay a second visit—this time accompanied by a builder or skilled friend—and if everything be satisfactory, you can commence negotiations by offering your maximum price.

In nearly all cases the cost of transfer is paid by the purchaser; but it is sometimes arranged that all costs are covered by one lump sum.

In cases where you enter as a yearly,

quarterly, or monthly tenant, a simple agreement is sufficient, making it obligatory on either party to give such notice of terminated occupation as may be agreed upon at the outset. This agreement should also contain a clause distinctly stating what repairs the landlord undertakes to do. The tenant should also see that there is no clause forcing him to pay the taxes; if not especially stipulated to the contrary, the landlord is obliged to pay them.

Sanitary Law.—The observance of the principles of cleanliness and care in the management of a house is all-important. Before these principles were understood, the rate of mortality, in large towns especially, was much higher than it is now. In choosing a house or apartments, strict attention should be paid to drainage, ventilation, light, and water supply, and if these are all good, you may congratulate yourself on a fortunate selection.

Drainage is one of the great characteristics of modern building operations; for though the principle of carrying off the refuse of towns is of ancient date, the practice was, in this country, until recently, only partially carried out. See that the fall from the house-drainage to the main sewer is considerable—eight to twelve feet at the least. Avoid, if possible, drains passing through the house; and see that the kitchen and out-house drains are ample and efficient. In hot seasons disinfectants—a list of which will be found under the section "Domestic Chemistry"—should be freely used, if there be any odours.

Ventilation.—The great desideratum is a free current of fresh air through all the rooms. Early in the morning (except when the weather is very foggy) open all windows, doors, chimneys, and ventilators, and thoroughly freshen the whole house. As soon as the family are up, the beds should be stripped, the sheets, pillows, blankets, &c., placed about the room, the windows opened top and bottom, and left so for a couple of hours or so. Many persons think that windows should only be opened in warm weather. This is a great mistake, as fresh air is just as necessary in cold weather as in warm.

Light is an indispensable essential to health. A room flooded with light early in the morning is cheerful and pleasant all day. The complaint made in summer of the great heat of rooms much exposed to the sun has certainly some truth in it; but summer heat may be tempered in many ways. Outside blinds are excellent, and indeed almost essential to rooms upon which the sun shines many hours. Another excellent mode of cooling sunny rooms is to place a large glass bowl, such as gold fish are kept in, in the centre of the room. Fill it with cold water, and put into it as many little branches as it will hold, the lower ends downwards, of willow, or other tree. By this easy expedient an apartment will in a short time be rendered much cooler, the evaporation of the water producing the desirable effect without detriment to health. Besides, the exhalation of green plants, under the influence of the sun's rays, greatly tends to purify the air. Plants, however, should not remain in the room after nightfall, or in the shade, and especially not in bed-rooms. Fresh branches and fresh water should be used every day, and if tastefully selected and arranged this tree-bouquet will be found a graceful and novel ornament.

In the matter of *artificial light*, if gas is used, see that the fittings do not allow any escape. Patronize "patent" burners, as the ordinary burners allow a large quantity of unconsumed gas to pass, which fills the room, and is the fruitful cause of headaches and nausea.

The *Water Supply* should be constant, if possible. Rain-water will be found sufficient for many purposes; but for drinking or cooking *all* water is better filtered. Boiled water is very good, but water filtered through animal charcoal is still better.

Decoration. — There is nothing like individual taste in these matters; but a few hints will be acceptable.

Have your *Parlour* decorated cheer-

fully. Let the wall paper be of no decided pattern, and light in colour. The mantel-pieces should be of white or variegated marble; the wood-work light, and the door-plates, &c., simply white and gold. Where the burners of the gas fixtures represent wax tapers, bronze is perhaps the more elegant material for the brackets and chandeliers. Chandeliers are always pretty, if kept bright.

In your *Dining-Room* a different style can be adopted. The paper should be rich and warm in tone, without staring patterns, and the cornice and mouldings massive. Most persons prefer "pattern" finger-plates and knobs in dining-rooms. The general effect should be that of substantial comfort.

Bed-rooms are usually ornamented with less care than they might be. The wall should be papered in light colours, the patterns not too prominent. The cornice should be small and neat.

Kitchens, &c., are more appropriately papered in varnished staircase paper, as the soils can be easily washed off. In many houses kitchens are wood-panelled, or the walls covered with tiles, after the good old fashion common in Germany and Holland.

Staircases should be papered with varnished marbled papers; and the cornices should be large and ornamental.

Outside decoration is so entirely a matter of taste, that it must be left to individual judgment.

Furniture.—Walnut, ebony and gold, or rosewood, for parlours, mahogany or oak for dining-rooms, maple, walnut, fir, or satin wood for bed-rooms, and deal or pine for kitchens, are the accepted woods for furniture.

In Furnishing a House let your guiding rules be that the same style, with modifications, be apparent all over your house, that in the employment of colour you avoid bad contrasts, that walls be well covered with mirrors, pictures, &c., and that the rooms be not overcrowded.

Bits of Advice.—Before putting down your carpets and floor-cloths lay down carpet-paper or newspapers on the floor. This simple process is of immense use in preserving carpets.

To Choose a Carpet. — Brussels carpets, although estimated by the beauty of design and colouring, ought to possess another very essential property, viz., durability. This arises more from the quantity and quality of worsted on the surface than from the ordinary operations of the weaver. In the best qualities the worsted warp-threads usually appear on the surface, in sets of threes, each set occupying the space between the linen warp-threads or chain, and of which threads there are about seven to an inch. This closeness of arrangement maintains the loops of worsted nearly upright, giving thereby greater elasticity, with a sustained resistance to the effects of pressure and wear. Inferior carpets usually have a reduction in the quantity of surface worsted, produced by dropping loops. The quality of worsted is not less important than the quantity; indeed, a carpet made of good worsted, in a smaller quantity, is to be preferred to one crowded with an inferior material. Good worsted is bright, evenly twisted, free from loose, hairy fibre, soft and elastic to the touch. Crimson and scarlet are very durable colours; greens are sound; and brown, buff, and fawn colours rather less permanent.

Choose your Window Blinds according to taste. If Venetian, then let them be green or drab. With white blinds you should also have outside blinds, either lath or striped linen canvas, so as to keep your rooms cool. Spring blinds are the most handy and economical.

If any of your rooms are underground, or partially so, don't use wire blinds, but make a screen of flowers, gold fish, ferns, or something of the kind.

Flowers are appropriate in, and enhance the appearance of, every room in the house but the bed-rooms.

An extra suit of covers—of holland—will be found very useful for your chintz or parlour furniture.

Have hot water in your bed-room, if you have no bath or dressing-room.

Have a gas bracket in your basement passage.

Immediately you have furnished your house, make out a list, and insure for the full value.

Have no dark corners about your house: if they are there, and you can't help it, fill them up, or they will be continually choked with rubbish.

Have the gas laid on in every room in the house. It is the safest, most convenient, and cheapest plan.

Towels, white damask table-covers, table-napkins, toilet-covers, &c., &c., should all be of very superior quality, as their fashions never change, and they last a great length of time.

Let your house be well furnished with bells, and keep them in perfect repair. Every young wife will acknowledge the benefit of a bell from the nursery or servants' room to the parlour or bed-room. See constantly to your locks and latches.

Let your pantry and filters be cool and airy.

Never let small repairs, either to house or furniture, be neglected, even for a day.

Draughts in a house cause great discomfort, and a house is frequently draughty through being constructed on erroneous principles; this is particularly the case when the back door is placed immediately opposite the front entrance. A direct draught should be avoided, and this may, in some cases, be remedied by an intermediate door of cloth or baize, which will in some measure prevent the inconvenience. Strips of fancy leather should be employed.

In the *Management of Lamps* several points are to be observed. If the wick be turned too much the oil will not rise readily; nor should it be too loose or it will cause the capillary attracting power to raise too much oil. Lamps require constant attention to the wick, otherwise the light will be unequal. Trim your lamps daily. The wick should be cut perfectly level with scissors; any ragged bits on the edge of the wick cause the flame to burn unevenly, and to smoke.

In the matter of *Gas*, when the quantity that escapes is but small, it may be discovered by its smell, and there may be yet no danger; but when the quantity is large, it forms with the common air a highly explosive mixture. Whenever it is expected, therefore, that gas may have escaped into a room, first go in (*without a light*) and open the doors and windows wide. Let them remain open for some time; and then, when the smell has decreased, endeavour to ascertain where the leak is. Grease, or rag steeped in oil, is a handy and efficient plug.

To Cure Smoky Lamps. — Soak the wick in strong vinegar, and dry it well before you use it; it will then burn both sweet and pleasant.

Paper-hangings. — Light paper-hangings imbibe less heat and light than dark ones, and consequently maintain a lower temperature, Summer-rooms should therefore be hung with light and pretty, and winter-rooms with dark, warm papers.

Whitewashing.—The following is a good mode:—First, wash the plaster over with clean water, by means of a large flat brush, to remove the dirt; then stop all cracks and flaws with new plaster; and in doing this, it is frequently necessary to cut away the plaster in such places to obtain a clean first surface to enable the new plaster to adhere. When the surface is dry, the whitewash, made of whiting mixed up in water, is laid on with the brush, and is gone over two or three times, so as effectually to obliterate all marks and stains on the surface.

Mode of French Polishing. — The polish itself may be bought ready mixed at paint-shops; but the mode of applying it needs to be explained. If the wood be porous, or of a coarse and open grain, it will be necessary to first give it a coat of clear size. When dry, gently go over it with very fine glass-paper. The size will fill up the pores and prevent the polish from being absorbed into the wood, and be also a saving of con-

siderable time in the operation. Make a wad with a piece of coarse flannel, or drugget, by rolling it round and round, over which, on the side meant to polish with, put soft, fine linen rag several times doubled. Put the wad or cushion to the mouth of the polish bottle, and shake the mixture. Damp the rag sufficiently; then proceed to rub your work in a circular direction, observing not to do more than a square foot at a time. Rub it lightly, till the whole surface is covered; repeat this three or four times, according to the texture of the wood; each coat to be rubbed till the rag appears dry. Be careful not to put too much on the rag at a time, and you will have a very beautiful and lasting polish. Be also very particular in letting your rags be very clean and soft, as the success in French polishing depends, in a great measure, on the care you take in keeping it clean and free from dust during the operation.

Furniture Paste.—Scrape two ounces of beeswax into a pot or basin; then as much spirits of turpentine as will thoroughly moisten it; powder an eighth part of an ounce of resin, and add to it, when dissolved to the consistency of paste, as much Indian red as will bring it to a deep mahogany colour; stir, and it will be fit for use. Elbow-grease and patience will do the rest.

Paste for Cleansing Brass-work.—Rottenstone, two ounces; oxalic acid, half-an-ounce; sweet oil, three-quarters-of-an-ounce; turpentine, enough to make a paste. Apply with a little water.

To Cleanse Brass Ornaments.—Wash with roche alum boiled to a strong ley, in the proportion of an ounce to a pint. When dry, rub with fine tripoli.

Colours for House-painting.—The following particulars will be found useful to those who wish to do their own house-painting:—

Stone colour: White lead, with a little burnt or raw umber, and yellow ochre.—*Graystone:* White lead and a little black.—*Drab:* White lead, with burnt umber and a little yellow ochre for a warm tint, and with raw umber and a little black for a green tint.—*Pearl, or Pearl Gray:* White lead with black, and a little Prussian blue.—*Sky Blue:* White lead, with Prussian blue.—*French Gray:* White lead, with Prussian blue, and a little lake. These last, used in various proportions, will make purples and lilacs of all shades.—*Fawn:* White lead, with stone ochre, and a little vermilion or burnt stone ochre.—*Buff:* White lead and yellow ochre.—*Cream:* Same as the last, with more white.—*Lemon:* White lead, with chrome yellow.—*Orange:* Orange lead, or chrome yellow and vermilion.—*Peach:* White lead, with either vermilion, Indian red, purple brown, or burnt stone ochre.—*Gold:* Chrome yellow, with a little vermilion and white.—*Violet:* White lead, with vermilion, blue, and black. *Sage:* Prussian blue, raw umber, and yellow stone ochre, with a little white, and thinned with boiled oil and a little turpentine.—*Olive Green:* Raw umber, with Prussian blue, thinned as before.—*Pea Green:* White lead, with Brunswick green, or with Prussian blue and chrome yellow.—*Brown:* Burnt umber, or vermilion and lamp black.—*White:* White lead only, mixed with oil and turpentine, and a very small quantity of black or blue, to take off any yellowness of colour arising from the oil.—*Chocolate:* Spanish brown, or Venetian red and black, thinned with boiled oil and a little turpentine.—*Lead:* White lead and black.—*Opaque Oak:* White lead, with yellow ochre and burnt umber.—*Opaque Mahogany:* Purple brown, or Venetian red, with a little black.—*Black* should be ground in boiled oil, and thinned with boiled oil and a little turpentine. The proportions of the colours above mentioned must be determined by the particular tone of colour required; and you increase the quantity in like proportions.

To Cleanse Oil Paintings.—Dissolve a small quantity of salt in rain water; dip a woollen cloth in the mixture, and rub the paintings over with it till they are clean; then wash them

with a sponge and clean water, dry them gradually, and rub them over with a clean cloth, or silk handkerchief. Should the dirt be not easily moved by the above preparation, add a small quantity of soft soap. Be very careful not to rub the painting too hard. The blackened lights of old pictures may be restored to their original hue, by touching them with deutoxide of hydrogen, diluted with six or eight times its weight of water, and afterwards washed with a clean sponge and water.

Fire-proof Paint.—Take a quantity of the best quicklime, and slack with water in a covered vessel; when the slacking is complete, add water, or skim milk, or a mixture of both, and mix to the consistency of cream; then add at the rate of twenty pounds of alum, fifteen pounds of potash, and one bushel of salt to every hundred gallons of creamy liquor. If the paint be required to be white, add six pounds of plaster of Paris, or the same quantity of fine white clay. All these ingredients being mingled, the mixture must then be strained through a fine sieve, and ground in a colour mill. When roofs are to be covered, or when crumbling brick walls are to be coated, mix fine white sand with the paint, in the proportion of one pound of sand to ten gallons of paint; this addition being made with a view of giving the ingredients a binding or petrifying quality. This paint should be applied in a hot state in cold weather to keep it from freezing. Three coats are sufficient. Any colour may be obtained by adding the usual pigments to the composition.

Fire-proof Mortar.—Take two-thirds of the best lime and one-third of smith's black dust, and mix with the necessary quantity of water. This will form a mortar that will set nearly as hard as iron.

To Stop Leakage in Hot Water Pipes.—Get some iron borings or filings, and mix them with vinegar, forming it into a paste; with this fill up the cracks, and if the pipe has been previously dried, and is kept dry until this has become quite hard, it will never fail to effectually stop the leakage, and will stand for a length of time. Should an iron pipe burst, or a hole be broken into it by accident, a piece of iron may be securely fastened over it, by bedding it on, in a salve made with iron borings and vinegar; but the pipe should not be used until it has become perfectly firm.

Cheap Filter.—Procure a conical jar—an ordinary flower-pot will do—with an aperture in the bottom. Into this aperture fit a clean sponge as firmly as possible; and the jar being then filled with water, and placed in such a manner as to allow the water to pass through it into a receiver, it will be found that all the grosser impurities of the water will be removed, and the water at the same time will be much softer and better fitted to drink. Or on the sponge may be placed a layer of fine sand and animal charcoal.

To Cleanse Steel and Iron.—One ounce of soft soap, two ounces of emery, made into a paste; then rub the article with wash-leather till bright.

To Keep Bright Fire Irons from Rusting.—Smear them over with hot melted mutton suet; before it cools and hardens, have some powdered unslacked lime in a muslin bag, and dust it on to the hot suet which covers the irons. Oil is of little use, but salad oil being the only oil free from water, should alone be used at any time for them. When not used, fire-irons should be tightly covered in baize.

Varnished Wood for Furniture.—This may be finished off so as to look equal to French polished wood. Take two ounces of tripoli, powdered; put it into an earthen pot, with just enough water to cover it; then take a piece of white flannel, lay it over a piece of cork or rubber, and proceed to polish the varnish, always wetting it with the tripoli and water. It will be known, when the process is finished, by wiping a part of the work with a sponge, and observing whether there is a fair, even gloss. When this

is the case, take a bit of mutton suet and fine flour, and cleanse the work. Suitable also to other varnished surfaces.

Hints for Housekeepers. — Save suds for gardens and plants.

Count your clothes-pins, spoons, knives, forks, towels, handkerchiefs, &c., every week.

Never pour boiling water on tea trays, but wash them with cool water, and polish with a little flour and a dry cloth.

Save pieces of bread for puddings; dry them well, and they will not turn mouldy.

Do not buy cheese in large quantities at a time, especially in summer.

A hot shovel, or a warming-pan of coals, held over varnished furniture, will take out white spots. Rub the place, while warm, with flannel.

Marble fire-places should not be washed with soap, which will, in time, destroy the polish; after the dust is wiped off, rub the spots with a soft oil-cloth, then rub dry with a rag.

When knobs of doors are rubbed, use a large piece of paste-board, with a hole in the centre, just enough to encircle the knob, and a slit in the paper to let it in. This slipped on will protect the paint from being soiled.

If flat-irons are rough, or smoky, lay a little fine salt on a flat surface, and rub them well, to make them smooth, and prevent them from sticking to anything starched.

Keep tapes, threads, and pieces of various fabrics in separate bags; and so save time in looking for them.

Change water in flower-pots every day in summer, or it will become offensive and unwholesome.

When clothes have acquired an unpleasant odour by being kept from the air, charcoal laid in the folds will soon remove it.

A bit of soap rubbed on the hinges of a door will prevent their creaking.

Rent and Taxes.—It has been said, and with truth, that the rent of his house should not be more than one-eighth of a person's income. This maxim will of course not hold good in every case; but, as a general rule, it may be taken as trustworthy. In calculating the expense or rent of a house in the suburbs of the town to which the head of the house may be obliged to go to business, the railway or omnibus fare must be calculated and added. Against this expense, however, there may occasionally be a set-off by taxes and rent being lighter than in town. Be sure before taking a house to ascertain the rate of taxes and rentals, or your estimated expenditure may be considerably exceeded. In three or more years' leases you can sometimes get a considerable reduction from the regular rent; but you must take care to bind the landlord down to do all needful repairs, or make you an extra allowance for them.

Police Cautions. — Though the police are employed to guard the streets from depredators, housekeepers and tenants will do well to back their efforts in the most efficient manner possible. The following Police Cautions will therefore very appropriately close this section :—

Burglaries or larcenies in houses attempted in any of the following ways may be most effectually prevented if due precautions are taken by the inmates :—1st. By entering with false or skeleton keys in the absence of the family, especially on Saturday and Sunday evenings. — 2nd. By passing through an empty house in the neighbourhood, and entering from the roof through the attic windows.—3rd. By window shutters insecurely fastened, which can be instantly removed, and property stolen by the hand, or passing any instrument through the window.—4th. By calling at houses under pretence of having messages or parcels to deliver, or work to perform, and, during the absence of the servant, stealing articles from the passage.—5th. By climbing up the portico, and entering through upper windows.

II. DOMESTIC COOKERY.

The Whole Art of Cookery may be defined in a sentence, as—*the best and most efficient ways of preparing raw food so as to preserve its natural qualities unimpaired and render it most palatable and nutritious.*

The several methods of cookery are Roasting, Baking, Boiling, Stewing, Broiling, Frying, and Toasting.

A choice meal does not necessarily imply great expense or great skill in its preparation. The first requisite for a good dinner is good sense. The best authorities should be consulted for receipts, and the instructions given by them should be carried out with care and patience; the materials being chosen with taste, and cooked with a judicious regard to their appearance at table.

As many French terms are employed in cookery receipts, the reader will find much assistance by turning to page 105, where will be found a definition of all the *principal terms used in modern cookery.*

Marketing.—A good and thrifty housekeeper will, if possible, go to market herself, in order to select the best pieces, and get them at the lowest price. A housewife will vary the kinds of meat which she buys, not only as they may be suitable to the seasons, but as calculated to promote the health of the family.

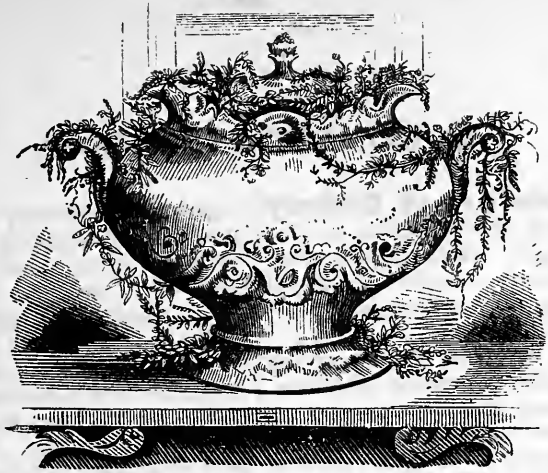
On page 112 will be found full and explicit directions *how to choose Meat, Fish, Poultry,* &c., in the market.

Arrangement and Economy of the Kitchen.—"The distribution of a kitchen," says Count Rumford, the celebrated philosopher and physician, who wrote so learnedly on all subjects connected with domestic economy and architecture, "must always depend so much on local circumstances, that general rules can hardly be given respecting it; the principles, however, on which this distribution ought in all cases to be made are simple and easy to be understood," and, in his estimation, these resolve themselves into symmetry of proportion in the building, and convenience to the cook. The requisites of a good kitchen, however, demand something more special than is here pointed out. It must be remembered that it is the great laboratory of every household, and that much of the "weal or woe," as far as regards bodily health, depends upon the nature of the preparations concocted within its walls. A good kitchen, therefore, should be erected with a view to the following particulars:—1. Convenience of distribution in its parts, with largeness of dimension. 2. Excellence of light, height of ceiling, and good ventilation. 3. Easiness of access, without passing through the house. 4. Sufficiently remote from the principal apartments of the house, that the members, visitors, or guests of the family may not perceive the odour incident to cooking, or hear the noise of culinary operations. 5. Plenty of fuel and water, which, with the scullery, pantry, and storeroom, should be so near it as to offer the smallest possible trouble in reaching them.

For useful hints on *Conduct in the Kitchen* the reader is referred to page 107.

Before describing the way to cook, we wish to say a few words in regard to the value of punctuality in the preparation of a dinner. No meal is well served that is not promptly served. "Waiting for Dinner" is a trying time, and there are few who have not felt—

"How sad it is to sit and pine,
The long *half-hour* before we dine!



SOUPS *see p.* 48).

VEGETABLES (*see p.* 97).

To face p. 22. SAUCES, GRAVIES, AND PICKLES (*see p.* 55).

Upon our watches oft to look,
Then wonder at the clock and cook,
* * * *
And strive to laugh in spite of Fate!
But laughter forced soon quits the room,
And leaves it in its former gloom.
But lo! the dinner now appears—
The object of our hopes and fears,
The end of all our pain!"

General Observations on Serving Dinner—Always have flowers on your dinner table. Let there be plenty of light during dinner, but it may be a little subdued after the cloth is removed. All the knives, plates, glass, &c., should be bright and free from dust. Above all things never attempt an elaborate dinner, unless you have the appliances and means of cooking it thoroughly well, and of serving tastefully and properly—with the regular changes of plates, knives, forks, &c.

The head of a dinner-table is always occupied by the lady of the house, who sits at that end of it, with face towards the door. In the case of a gentleman (bachelor or widower) having a lady housekeeper, the gentleman will then sit at the head; if there is no housekeeper, and ladies present, the host may invite a married lady to occupy the head of the table.

Best modes of Preserving Food.

Meat should be carefully examined every day in summer, wiped dry, and such parts as are beginning or seem liable to taint, particularly kernels, removed. In hot weather it may be kept for several days more than it otherwise would, by wrapping around it a linen cloth moistened with vinegar, or equal parts of vinegar and water; the acid vapour keeps off flies, and the moisture causes cold by evaporation. Fresh charcoal bruised to powder has also the property, spread over the meat, of preventing it from spoiling for some time. Meat, when but slightly tainted, may be recovered, by boiling it for some minutes with several pieces of fresh charcoal.

To preserve Fish quite fresh for a short time, requires great care. They should be kept in a very cool place—an ice-house, if possible; but if that is not available, they should be laid upon a stone floor or shelf, and dipped in cold salt and water every night and morning. If it be necessary to keep them a few days longer, immerse them in a pickle of vinegar and water.

Vegetables, as cabbages, and other vegetables of a soft nature, quickly lose their natural juices by evaporation from the leaves, which soon become flaccid and poor. As heat causes them to lose their juices, they should be kept in a cool, shady, and damp place, *not* in water, as that injures their flavour; the best method of refreshing them is to cut off a portion of the stem, and set the cut part in water. They should not be laid together in heaps, since this is apt to generate heat and fermentation.

To preserve Fruit.—Fruit should be gathered just before it is ripe; the floor and shelves of the room on which the fruit is placed should be strewn with straw, and the fruit should be laid on this without being suffered to come into contact with each other.

Poultry and Game must be hung in a cool place, covered with a muslin net to keep off the flies and dust.

Roasting, Boiling, Stewing, &c.

ROASTING.—This is the most simple and in many respects the best mode of cooking ordinary joints and poultry. As a general rule the cook will allow fifteen minutes to every pound of meat, and in the case of white meats,—as lamb, veal, and pork—a little longer. Make up a good large fire, let it be brisk, clear, and steady, and you then can obtain any heat you require by regulating the distance of the joint from the fire. Large joints should be placed at a moderate distance for the first quarter or half-hour, and then brought gradually nearer. For this quarter of an hour the meat does not require basting, but from the time it is placed closer, it should be continually basted (first with butter or lard, and afterwards

with its own dripping) until cooked. The meat should never be nearer to the fire than six to eight inches. Do not sprinkle the meat with salt when first put down, as this draws out the gravy. Fine flour should be lightly dredged over it from time to time, and a little salt when nearly done. Very lean meat will sometimes need to have paper placed over it for the early part of the roasting, or it will scorch. In stirring the fire, always remove the dripping-pan, or ashes may fall in. If a bottle-jack be used, the hook should be so placed as to take in a bone, and the thickest part of the meat should hang downwards. If a spit, then slide it in along the bones, avoiding the prime parts of the joint, and be careful to spit the meat evenly: if it will not turn well, use balance-skewers with sliding heads.

BEEF.—*The Sirloin* should never be less than three of the short ribs, and to be first-rate, when cooked, it should not weigh less than about ten pounds. Cover the joint with buttered paper, and place it about a foot and a half from the fire. About an hour after it has been down, take off the paper, and bring the joint nearer the fire, and from that time until done dredge from time to time with flour and salt, basting continually with its dripping. When the joint is done, empty the dripping-pan into a basin, remove the fat from the gravy, and pour the latter into a well-dish, garnished with finely-scraped horseradish. Place the joint in the dish, and serve very hot. Yorkshire pudding cooked under this joint is much liked.

Ribs, Rump, Aitch-bone, and other joints of Beef, require similar treatment.

MUTTON should never be cooked until it has hung for fully forty-eight hours. In winter you can sometimes keep it a fortnight, and it will be all the better for it.

The Saddle should be covered with buttered paper, and placed about a foot and a half from the fire. The roasting of this joint does not take quite so long in proportion as any other. Keep the paper on until within a quarter of an hour of the meat being done, then remove it, dredge lightly with salt and flour. Serve with its own gravy, and red-currant jelly.

Haunch of Mutton.—Cover with paper as for saddle, but remove it half-an-hour before the joint is cooked. Baste well with butter, or its own dripping, and dredge slightly. Serve with its own gravy and red-currant jelly. Mashed potatos should accompany this joint, and, if in season, French beans.

Leg of Mutton is better cooked with the bottle-jack than the spit. Cover with paper, which remove ten minutes before done; baste with butter or its own dripping, and dredge slightly. Serve same as haunch, with the proper vegetables.

Shoulder of Mutton should not be basted while roasting, but instead rubbed sparingly with butter. White onion sauce is usually (*see* Receipt) served with this joint.

Loin and Neck of Mutton, should be roasted like haunch, and served very hot.

LAMB is roasted in the same way as mutton; but as a rule will require to be better done. A little lemon-juice squeezed over the joint when nearly ready for table, is, by many, considered an improvement. Mint sauce is always served with roast lamb.

VEAL should be eaten fresh, and should never be allowed to hang more than thirty-six to forty-eight hours in summer, and four days in winter. The prime joints for roasting are the fillet and the loin. Roast as for beef.

The *Fillet* requires great care in roasting. It should have the bone removed, and the cavity filled with stuffing (*see* Receipt.) Then fold the udder, and flap round and skewer tight. Cover the top and bottom with buttered paper, and put down to the fire. Let it be quite close for the first quarter-of-an-hour, during which time the joint must be well rubbed with butter, and then remove it to about two feet from the fire, so that it roasts slowly. Keep the paper on all the time, and by these means you will have veal a fine light brown

almost golden colour. A fillet of twelve to sixteen pounds will require about four hours to four and a half hours roasting. Serve with hot melted butter, flavoured with catsup.

It is usual for this joint to be accompanied with either a boiled ox-tongue, a small ham, or a piece of boiled pickled pork. In all cases send two or three lemons to table with veal. Some cooks garnish the dish with sliced lemon.

Loin of Veal requires rather less time to roast, but should be treated in the same manner as the fillet. Serve with melted butter. You can either take out the kidney and its fat and serve separate on toast, or leave it to be carved with the joint. The fat about the kidney should be thoroughly cooked.

Chump, Breast, and Shoulder of Veal may also be roasted and served like the loin. The breast is best roasted with the sweetbread skewered to it.

PORK takes longer to cook than other meats—from twenty to twenty-five minutes per pound should be allowed. If not well done, it is neither wholesome nor agreeable. The parts usually roasted are the loin, spare-rib, chine, and leg.

Leg of Pork.—The rind should be scored, and the stuffing (*see* Receipt) put in the day before cooking. Roast steadily, basting with its own fat. It does not require to be papered, unless the fire be very fierce. Serve with gravy and apple sauce in a bowl. Some persons like onion sauce, or sage and onions, with pork.

The Spare-rib of Pork should be well rubbed with flour when put down to the fire, and dusted with powdered sage before taking up; froth up with butter, and serve hot.

Sucking Pig is sent to table roasted whole. It should be rubbed thoroughly dry, and slightly floured, stuffed with veal stuffing, and roasted before a brisk fire. Let it be thoroughly done a light brown all over. This will take from one to two hours. It is served with the head cut off, and it and the body divided lengthways, with sauce made of the brains, and melted butter (seasoned) and plain apple-sauce. Some persons rub the pig over with white of egg instead of flour, before cooking.

VENISON is never eaten until it has hung for some time.

The *Haunch* is esteemed a great luxury, and is thus roasted:—Wash the joint thoroughly in milk and water, and then dry it. Next cover it with a stiff paste of flour and water, and outside that two or three layers of stout paper, securely tied. Place the joint in a cradle-spit. This is the only way to roast a haunch properly—so that it is perfectly balanced, and turns evenly. Put it very close to the fire, to crust the paste, keeping the paper well saturated with grease. After a short time move it a little back. A good sized haunch, weighing from 20 to 25 pounds, will require from three to four hours roasting, before a large, clear, solid fire. When you think it is nearly done, remove the paste and paper, and lightly dredge with flour—basting with butter—until it froths and browns. Serve with its own, and also some strong brown gravy. Currant jelly, or currant jelly sauce, is served with it, and, if in season, French beans. To see if sufficiently done, when you take off the crust, thrust a thin skewer into the thick part; if it passes in readily, the meat is done; if not, the haunch must be put down to the fire again in the coverings. Many cooks put a layer of buttered paper *inside* the paste as well as outside.

Fawns, when small, should be treated like hare (*see* Hare), but when of a tolerable size, they can be dressed like lamb.

Kid may also be prepared like lamb, but if very young they are better prepared in the same way as rabbit.

Poultry.—Though this delicious food is usually had from the poulterer, already plucked and drawn, we append a few hints by Soyer:—

To Pluck either Game or Poultry.—Lay the bird upon a board, with its

head towards you, and pull the feathers away from you, in the direction they lie. Many persons pull out the feathers the contrary way, by which means they are likely to tear the skin, and very much disfigure the bird for the table.

To Draw Poultry or Game.—After it is well plucked, make a long incision at the back of the neck, take out the thin skin from under the outer, containing the crop, cut the neck off close to the body of the bird, but leave the neck skin a good length. Make another incision under the tail, just large enough for the gizzard to pass through—no larger,—then put your finger into the bird, and remove the crop; then loosen and detach all the intestines, taking care not to break the gall-bladder, squeeze the body of the bird, so as to force out the whole of them at the tail; it is then ready for trussing.

Roast Turkey.—There are several ways of preparing turkeys for roasting, the best of which are here given:—Truss by breaking the leg bones, and drawing out the leg sinews; cut the neck off close to the body; cut the breast-bone on each side, and draw the legs up; then put a folded cloth over the breast, and beat it down until flat; skewer in the joints of the wings, the middle of the leg and body, the small part of the leg and body, and the extremity of the legs. Singe thoroughly, and then fill the skin of the neck, or crop, with stuffing (*see* Receipts); tie the skin under, and put in on a small sized spit, or hang it, neck down, to a bottle-jack, and place it about a foot and a half from the fire. In a quarter of an hour rub the bird over with a little butter; when this is melted, draw it a little farther from the fire, and take great care not to let the skin break by the fire being too fierce. For the last quarter of an hour of roasting you should occasionally rub on a little butter. Do not baste. The liver should not be put under the wing, as the gravy from it disfigures the bird. There is not this objection to the gizzard being placed there. Some persons cover the breast with buttered paper, but this will not often be found necessary if care be exercised to prevent burning. Serve with plenty of rich gravy, which pour *under*, and not over, the bird. An excellent gravy is made of the fat from the frying-pan in which you have cooked your sausages (which should always garnish the dish of plain roast turkey), the ordinary brown gravy, and a teaspoonful of arrowroot, previously mixed in a little cold water. A turkey of from five to seven pounds weight will take two hours. Bread sauce (*see* Receipt) should be served with roast turkey, and a boiled ox-tongue, or ham, may accompany it.

All birds, poultry, and game may be roasted in this manner.

Another way to stuff Turkey is to place a quarter of a pound of butter, with pepper and salt, in the bird; then stuff with truffles, forcemeat, and sausage-meat in alternate layers. Put the bird in a cradle-spit, baste well with butter, and roast slowly.

A third method is to stuff entirely with chestnuts. Take their outside skins off, and plunge the chestnuts into boiling water. In two or three minutes the inner skins will easily peel off; then boil the chestnuts by themselves until perfectly tender. When ready, add a little butter, and stuff the bird. Roast as before, and serve very hot, with plenty of rich gravy.

Turkey stuffed entirely with Truffles is a very favourite dish. Take four to six pounds of black truffles, cut them up and stew them for about ten minutes in butter, seasoned with pepper and salt. This done, stuff the body and breast with them, roast, and serve as before.

All kinds of poultry are excellent, treated the same.

Roast Goose.—To truss for roasting, cut off the feet at the joint, and the wing at the first joint. Sever the neck close to the body, leaving the skin as long as you can; then pull out the throat, and tie the end in a knot; put your finger into the bird, and detach the liver, &c. Then cut open near the vent, and draw out all the inside,

except the little piece of the lungs called by poulterers the "soal." Cleanse the inside thoroughly with a damp cloth, and beat down the breast-bone as directed for turkey; skewer up, stuff, and roast before a moderately brisk fire; cover the breast with buttered paper for the first half-hour; baste with its own fat or butter, and serve with brown gravy and apple sauce. *Green Geese* are not stuffed.

Various stuffings are used for roast goose, the best of which are:—1. Six medium-sized onions, chopped small; two ounces of butter, half a teaspoonful of salt and pepper, a dust of grated nutmeg, six or eight leaves of fresh sage chopped very fine; put on the fire, and stir till pulp; stuff while hot, and put the bird down immediately. 2. Add to this stuffing the liver, chopped very fine. 3. Instead of the liver, put two or three cold potatos, cut up into small dice, or a little boiled rice, or two or three ounces of breadcrumbs. These additions make the stuffing milder. 4. A couple of dozen boiled chestnuts can be added to No. 1 stuffing, or the bird may be stuffed solely with chestnuts. 5. Boil some good potatos very dry, mash well, and mix with butter; season with salt, cayenne, a large onion or two or three small ones, and three or four sage leaves chopped very fine.—A glass of port wine is often poured into the bird when done.

FOWLS FOR ROASTING are to be prepared thus:—Take out the intestines, and clean the gizzard; put the gizzard under one wing, and the liver under the other; skewer through the first joint of the wing, right through the body; bring the legs close up, and skewer through the middle of both legs and body, and also through the drum-stick and side-bone, and another through the feet.

Roast Fowls—distinguished as chickens, capons, pullets, cocks, and hens—are dressed for roasting in the same way as turkeys, except that they are not usually stuffed. Capon is, however, sometimes cooked with turkey-stuffing. Capon is improved by a slice of fat bacon tied over the breast, under paper, until about a quarter of an hour of the bird being done. Dredge fowls, and baste with butter. All fowls must be well cooked, nicely browned, and sent to table very hot, with rich gravy.

Roast Capon may also be served with young carrots, button onions, or turnips, boiled with salt and pepper, and dished on a border of mashed potatos, they look well on table.

Roast Duck.—Prepare and stuff as roast goose, with sage, onions, and breadcrumbs, and roast before a brisk fire. A medium-sized duck will require about twenty-five minutes. Green peas, when obtainable, should always be served with this dish.

Roast Hare.—Considerable care must be exercised in preparing a hare for roasting. Directly after it is skinned, it should be well washed in warm water. If it has been over-kept, and has got musty inside—which will often happen if it has been emptied befort hanging up—use vinegar, well diluted, to render it sweet; then throw it into water to remove the taste of the acid. Pierce with the point of a knife any parts in which the blood may have settled, and wash in tepid water. Wipe dry, fill with forcemeat or good veal stuffing, sew up, truss and spit firmly, baste for ten minutes with warm water, throw this away, and put into the pan a quart of new milk; keep it constantly ladled over the hare until it is nearly dried up, then add a large lump of butter, flour the hare, and continue the basting steadily until it is well-browned: unless this be done, and the roast be kept at a distance from the fire, the outside will become dry and hard. Serve with good brown gravy in the dish, and red currant jelly separate. A moderate-sized hare takes about forty minutes.

Roast Leverets.—Do not stuff, but plain roast, and serve with brown gravy. A little less than half an hour before a brisk fire will suffice.

Roast Rabbit.—Stuff with the liver minced, breadcrumbs, a little chopped parsley, butter, salt and pepper, mixed with beaten egg. Roast before a sharp fire, baste constantly with butter, and serve with plain gravy.

Roast Teal.—Roast plain for about

ten minutes before a brisk fire, and serve with rich gravy.

Woodcock, Snipes, Larks, Quails, &c., are all best when roasted plain. They must be well done, and served on toast, with a little rich gravy.

COOKING BY GAS.—Joints, poultry, &c., may be roasted, and pies, &c., may be baked in a gas stove, which is a clean and economical contrivance, seeing that the fuel is only employed during the actual time of cooking. Care must be taken that there is no escape of gas, or the meat will be touched with its odour, and the heat be insufficiently applied. For large establishments, gas-cooking apparatus is very useful.

COOKING IN AMERICAN AND DUTCH OVENS.—Poultry, small joints, chops, steaks, rashers, fish, bloaters, &c., may be well cooked in front of the fire in these stoves, which have the advantage of radiating and regulating the heat, and employing less fuel than in an open stove. Baste well, as for roasting.

Baking.

HOW TO BAKE.—Many meats can be cooked as well in the oven as on the spit or jack. Legs, spare-ribs, and loins of pork, sucking pigs, fillets or breasts of veal, small joints of roasting beef, shoulders and legs of mutton, all kinds of hearts, geese, rabbits, and hares are the fittest for the oven, and these may, with care, be sent to table as palatable and well-looking as if roasted. The great fault with housewives is, that they do not *baste* their joints while in the oven, and consequently the meat is burnt outside, and sodden inside. For meat the oven should be brisk, as if the joint scorches, a piece of paper can be put over and round it for some time, taking care to remove it at least half an hour before done. When poultry is baked, the heat of the oven should be moderated a little. If potatos are baked under meat, a little longer time must be allowed the joint, as the steam from the potatos hinders the cooking.

Many persons prefer a *ham* baked to boiled, as it is said to keep longer after dressing. It must be covered with a common crust of flour and water, and baked in a moderately slow oven.

Several kinds of *Fish*—as haddock, plaice, pike, eels—can be baked with bread crumbs.

The Baking Dish or *Tin* should be from four to six inches deep, and have a movable wire lid, or a stand for the meat. The dish or tin should have one or two partitions. For pork, and especially sucking pigs, a shallower tin is to be preferred, as then the rind, or crackling, is better done.

Sucking Pig.—A favourite *Stuffing* is—a quarter of a pound to six ounces of bread-crumbs, two ounces of butter, two or three small onions chopped fine, three or four sage leaves minced very small, and a pinch of pepper and salt. Having this ready, you thoroughly wash the pig, first in tepid, and then in cold water, take out all the inside, and dry it thoroughly; then put in your stuffing, and sew up. Rub the skin dry and anoint it with white of egg. It will require from one hour to two to bake, according to size, and to be basted with its own gravy from time to time. The best way of serving it is to cut off the head when done, and divide both it and the body lengthways. Many persons serve with the plain gravy that has run from the pig, but a better plan is to chop up the brains with a little finely minced sage (boiled), and add it to the gravy. Serve very hot. Apple sauce is to be served separate.

Ham.—Soak in cold water for six to ten hours; take out and wipe moderately dry; then make a thick paste of flour and water, and entirely cover the ham. Bake in a slow oven, allowing from twenty minutes to half an hour per pound, according as it is preferred well or under done. When done, remove the paste and also the skin of the ham, and sprinkle with bread raspings. Many persons after taking it out of soak, and before encrusting it, steep it for about a quarter of an hour in white wine: others, when it is done, and the crust and

rind off, put it in again for about ten minutes to brown. A glass or two of champagne poured over before the raspings are sifted on, is said to improve the flavour.

Leg of Pork.—Score lightly so as not to cut into the fat, and stuff the knuckle with bread-crumbs, a few finely minced sage leaves, a couple of *boiled* onions chopped very small, pepper and salt to taste. Baste continually with its own fat, and serve with apple sauce, and baked and boiled potatos separate. The oven should be sharp, and the time allowed for cooking twenty-five minutes to every pound of meat.

Proceed in the same manner with loin of pork, neck, and spareribs. Many persons baste these joints with cider.

Leg of Pork can also be cooked by first parboiling it, removing the skin, and then baking to a fine brown, keeping it basted with fresh butter. This, dusted with powdered sage, and fine bread-crumbs, and served with made gravy and fried forcemeat balls made of goose stuffing, is called "mock goose."

Loin of Pork is often dressed thus:—cut as for chops, but leave the end bones undivided. Chop sage leaves very fine, and lay them in each cut; then let the meat soak in vinegar and water (half of each) for six or eight days. Take it out, dry it, add more minced sage, tie or skewer up tightly, and bake in vinegar and water, rind downwards. Serve, without gravy, with red wine—claret will do—and sweet sauce. This is said to eat like wild boar.

Fillet and Breast of Veal may be baked, prepared as for roasting (which *see*), taking care to baste thoroughly with butter. As white meats for baking require to be a trifle more highly seasoned than for roasting, a few sweet herbs, dried and powdered, and without stalks, may be added to the stuffing.

Shoulder of Veal is good baked with stuffing as above, and served with mushroom or oyster sauce.

Fillet of Veal.—Another way. Skewer up very round, and cover well with udder; place a good piece of streaked bacon where the bone was taken out, and stuff under the udder thus: chop three quarters of a pound of beef suet very fine, put into a basin with six ounces of bread-crumbs, the rind of half a lemon chopped very fine, a little grated nutmeg, two tablespoonfuls of chopped parsley, and a little chopped thyme and marjoram, with one bay-leaf, mixed; bind the whole with the yolks of three and two whole eggs, sew it in, and tie up the joint in buttered paper. Bake for about three hours in a moderately brisk oven. When done, skewer up with silver or polished skewers, drawing out those it was first trussed with, place upon your dish with celery sauce, white sauce, (*see* Receipts), or thin melted butter, with which you have mixed two tablespoonfuls of Harvey sauce and one of catsup, and boiled to a clear brown.

Beef.—The same joints of beef are suitable for roasting and baking. The oven must be very hot, but well-ventilated. Dust lightly with flour before putting in, and sprinkle with a little salt when about three parts done. If the oven be too fierce, and scorch the corners of the joint, open the door for two or three minutes. Baste frequently—first with butter, and then with its own gravy. Serve very hot in a well-dish, garnished with horseradish. Almost any vegetables are suitable with beef, but always serve potatos, either boiled plain, or mashed with fresh butter, and a little salt and white pepper. Cauliflowers and white cabbages may have a little of the beef gravy poured over them.

Mutton may be baked with sliced potatos.

The Shoulder should be well-floured, and continually basted. Brown well, and send to table very hot with its own gravy, slightly salted, and white onion sauce (*see* Receipt) separate.

Leg of Mutton must also be dredged with flour and frequently basted. Do not serve with hot water poured over it; but if liked, thicken the gravy

a little with flour. Red currant jelly is usually eaten.

Loin of Mutton.—Remove a good deal of the fat, and cook same as leg.

Fillet of Mutton.—Cut a large leg of mutton like fillet of veal. Remove the bone, and fill the cavity with forcemeat. Flour well, bake in a sharp oven, basting frequently, and serve with brown gravy and red-currant jelly.

Goose, Rabbit, and Hare are all very good baked, and the same directions apply as for roasting, which *see.*

Hearts of all kinds are better baked than roasted.

Bullock's Heart must be soaked in warm water for two or three hours, and then dried, and the lobes cut off. Stuff the inside with veal stuffing, or some highly seasoned forcemeat. Sew it up, envelope it in white paper, and bake in a brisk oven from one and a half to two hours, keeping it well basted. Just before ready, take off the paper; serve very hot, with rich brown gravy and red currant jelly.

Calf's Heart and Sheep's Heart are dressed in the same manner, but do not take quite so long cooking.

Baking Fish.

Haddocks are baked thus :—Cut off the heads and fins of two or three and put into a stewpan, with an onion, some parsley, salt, pepper, and two anchovies, cut up fine, a little flour, two tablespoonfuls of French white wine, and a little catsup. Boil well up together, and when the fish has been skinned and cut into pieces, lay them in a deep pie-dish; pour the sauce over them, and bake. Strew the bottom of the dish with bread-crumbs, and put some more over them; season well with pepper, salt, and grated nutmeg.

Plaice and Herrings are baked in a dish, with water, or milk and water. Flour well, and bake to a good brown. Serve with parsley and cut lemons.

Eels, Bream, Carp, Tench, and Perch may all be baked in the same manner.

Cod.—The thickest part of the cod should be chosen for baking. Fill with a stuffing made of grated bread-crumbs, a little butter, the yolks of three hard boiled eggs, pepper, salt, grated lemon-peel and nutmeg, and anchovy finely shreded, binding the whole with white of egg beaten up; put on a dish with bits of butter over the top, and bake for an hour. A Dutch oven is also suited for this dish. It requires to be frequently basted and turned; plain melted butter or oyster sauce should be served with it.

Cod's Head and Shoulders may be dressed thus :—Wash well, cut off the fins, lay on a dish, pour boiling water over part, and scrape off all the black scales, taking care not to break the skin, till every part of the fish looks white, then wash in cold water; put on in boiling salt and water, and boil for a quarter of an hour; then lay on a dish and rub with the beaten yolks of two or three eggs, and strew with bread-crumbs, pepper and minced parsley; stick it all over with little bits of butter, and put it in an oven to brown; then mix a large tablespoonful of flour with a quarter of a pound of butter, a quart of gravy, a tea-cupful of white wine, some pepper, salt, and a little grated nutmeg; mince the white meat of a lobster, slightly brown three dozen of oysters in a frying-pan, and put them with half their liquor and the lobster to the gravy and other things; beat it up and pour round the dish; garnish with cut lemon. It is not necessary to have lobster and oysters.

Gurnet.—Fill the inside with veal stuffing, cover with butter, and bake to a good brown.

Mackerel.—Cut off the heads and tails, and clean the fish; then season with pepper and salt; lay in a dish with a little butter, and bake in a slow oven. They may be eaten hot or cold; if hot, with any of the usual fish sauces; and if cold, with vinegar. A little vinegar and port wine may be added to them.

Oysters.—Chop fine, and pound in a mortar with crumb of bread dipped in cream; a little parsley and chives, or a very small onion, a shred of anchovy, butter, salt, and pepper.

When well pounded, add white of egg beaten up, in the proportion of one egg to two dozen oysters; mix all well together, put into scollop shells, and bake brown.

Pike.—Clean and scale the fish, take out the inside, and fill with a stuffing of bread crumbs, a little fresh butter, grated lemon-peel, nutmeg, pepper and salt to taste—the whole bound with an egg. Bake in a tin dish, and baste continually with fresh butter. Serve with lobster sauce, or plain melted butter.

Salmon.—Clean, cut the fish into slices about an inch to an inch and a half thick, put it in a dish, with the following sauce:—Melt an ounce of butter, kneaded in flour, in a pint and a half of brown gravy, with two glasses of port wine, two table-spoonfuls of catsup, two shredded anchovies, and a little Cayenne. When the anchovies are dissolved, strain and pour the sauce over the fish, tie a sheet of buttered paper over the dish, and bake till nicely brown.

Shad, when good—which is in spring and early summer—may be baked in the same way as salmon.

Sturgeon.—Lard with fat bacon, and bake in a slow oven. Serve with mushroom sauce, or stewed truffles.

Red Mullet.—Fold them in buttered paper, lay in a dish, and bake before the fire in a Dutch oven; throw off the liquor into a saucepan, and boil up with a slice of butter rolled in flour, a little essence of anchovy, and a glass of white wine. Serve the sauce in a boat, and the fish on a dish in the paper in which they have been cooked.

Sprats.—Put into a dish with vinegar and allspice a quantity of fresh sprats, wiped clean; flour the top slightly, and bake to a good brown.

Trout.—Clean well, split down the back, remove the bone, and dry with a cloth; season with black pepper, salt, and a little mace pounded; roll them up and pack close in a dish; pour over them some vinegar; put in two or three bay leaves, and some whole pepper, and bake in the oven for an hour, covering the dish with buttered paper.

Baking Pastry.

The heat of the oven should be regulated according to the article to be baked. Those things should be first made which will suit the heat of the oven. Light paste requires a moderately quick oven; for if the oven is too hot, the paste will be coloured before it is properly baked; and if it is then taken out of the oven it will fall, and become flat. A cool oven will not cause pastry to rise sufficiently; and puff-paste baked in an oven with anything that causes much steam, will not be so light as otherwise. Iced tarts or puffs should be baked in a cooler oven than those that are not iced; or if the oven is too hot, the door should be left open, or the iceing will become brown. Small articles of pastry require to be baked in a hotter oven than large ones. All pastry should be baked in clean tins or patty pans, without being buttered. When baked sufficiently, pastry may be easily slid about on the tin, or pan, while hot; and puffs, patties, or small pies, may be lifted from the tin, without breaking, by putting your fingers round the edges and carefully lifting them, which cannot be done unless they are sufficiently baked to be taken from the oven.

Boiling.

How to Boil.—The meat should be put into boiling water, and kept gently simmering until done. This is an invariable rule, for otherwise the water gets into the meat and soddens it. Liebig says that "if the flesh be introduced into the boiler when the water is in a state of brisk ebullition, and if the boiling be kept up for a few minutes, and the pot then put in a warm place, so that the temperature of the water is kept at 158 to 165 degrees, we have the united conditions for giving to the flesh the qualities which best fit it for being eaten."

By this means the natural juices are kept in the meat. The slower

meat boils, or rather simmers, the better it will eat; but the water must never be allowed to get cool.

Twenty minutes to the pound may be considered about the average time for meats.

The saucepan or kettle should be of sufficient size to allow the water to flow all round the meat.

Large joints should be raised from the bottom of the saucepan by means of a trivet or fish drainer, to prevent the under side burning.

Meat should not be boiled in a cloth.

Keep only a moderate fire for boiling.

Meat that has been fresh killed will take a little longer than hung meat.

If meat is too salt, change the liquor when a quarter done.

The scum must be taken off as fast as it rises.

Never boil meat without there being a little salt in the water.

Salted and dried meats will want soaking for some considerable time before boiling, but never soak fresh meats.

If the water be hard, boil it for a couple of hours before using.

Round of Beef should be in salt for about eight or nine days. When your water is boiling, wash off the salt and skewer up the joint. Put it in, and let it just boil up. Directly it does so, remove it to a corner of the fire, and let it simmer gently till done. A piece of round, weighing from twelve to sixteen pounds, will take three to four hours, at least. The *greatest care* is necessary to remove all scum as it rises. Serve with a little of the liquor, carrots, and suet dumplings. Turnips, parsnips, and peas-pudding are also appropriate accompaniments.

Aitchbone, Brisket, and Rump of Beef may be boiled in the same manner. If very salt, two or three hours soaking in cold water—which may with advantage be changed once or twice—will improve the flavour. A joint of twelve pounds will take about three hours after it boils up.

Ribs of Beef, in small joints, may be cooked like Round. A piece of six to eight pounds should be boned, salted and skewered up round. Put it in strong brine for four days, turning the meat twice a day. Then boil as for round, letting it simmer for two to two and a quarter hours.

Leg of Mutton.—Put into boiling water, and skim carefully, and then let it only simmer. This joint should not be overdone; the red gravy should follow the knife when cut. Capers, chopped fine and put into melted butter, may be thrown over the joint, and some more of the same sauce should be served in a sauce tureen. Mashed turnips are usually served with boiled mutton.

Neck of Mutton may be boiled and served same as leg.

Collared Mutton.—The best joint is the breast, but the shoulder will do. Take out all the bones, make a forcemeat with bread crumbs, parsley, lemon-thyme, and an anchovy minced; season with salt and pepper; rub the meat over with an egg, cover it with the forcemeat, roll firmly, and tie; put it on in boiling water, and skim well; make a good gravy, seasoned with sweet herbs and mushroom catsup.

Leg of Lamb is very good boiled and served same as leg of mutton, (which *see*). Spinach should be eaten with boiled lamb.

Collared Breast of Veal. — Bone, and lay some good forcemeat over the veal. Roll it up, and tie round with tape; envelope in a cloth, and simmer gently for three hours. Fry some forcemeat balls, and serve with brown sauce.

Knuckle of Veal must be boiled rather longer than most meats, until it feels very soft under a fork. It must not boil too fast, and be well skimmed. If cooked in milk and water, it increases its whiteness. Pickled pork or ham should be boiled and served with it. Parsley and butter or white onion sauce are appropriate.

Another method is to procure two knuckles and saw them into three pieces each, put into a stew-pan with two pounds of streaked bacon, a carrot, four onions, two turnips, and half-a-dozen peppercorns: place over

the fire, and add a little salt when boiling; skim well, and allow to simmer for a couple of hours, then take up, and dress with the vegetables and bacon, in the same dish as the veal; serve with parsley and butter.

Calf's Head.—The head must be split, and the brains and tongue removed. Wash well, and soak for two hours in cold water; boil it with the tongue and brains gently in plenty of water, until quite tender; pour over the head parsley and butter made very thick; rub the brains through a sieve, add some chopped parsley, pepper, salt, and a bit of butter; mix, and put it round the tongue.

Sheep's Head may also be treated in the above manner.

Leg of Pork.—About eight days will be found sufficient for salting; then soak in cold water for an hour, and dry with a cloth. Put it into *cold* water, and let it gradually come to a boil, after which it must very gently simmer, till well done, which will be, for a leg of nine or ten pounds, three to three and a half hours after the water boils. Carrots, parsnips, or turnips should be served with this dish, and may be boiled with the meat. Peas-pudding (*see* receipt) must always accompany it.

Ham.—Soak it as for baking, and put it into cold water, with a bunch of savoury herbs; when the water begins to simmer, let it cook gently, until it is done, skimming constantly: allow about twenty minutes to each pound; when cooked, take off the skin, and cover with raspings. Serve on a dish garnished with parsley.

Bacon.—Soak in cold water for a couple of hours; pare off the rusty edges, and scrape the rind. Then put in cold water and boil gently, allowing three quarters of an hour to every pound of bacon. When done take off the rind, scrape the under side, and grate bread crumbs over it. Put in a hot oven for five minutes, and serve with broad beans or peas.

Pickled Pork.—Boil gently, till very tender, and serve with peas-pudding and plenty of vegetables.

Boiling Poultry &c

Turkeys, Fowls, &c., are trussed for boiling as follows:—After the bird is drawn and plucked, singe it with *white* paper, and wipe dry. If a turkey, break the leg bones close to the feet, fasten the feet together, and attach them to a hook; then take the body of the bird in your hands, and pull it firmly towards you, until the sinews are drawn out of the thigh. Then cut off the neck close to the back, leaving the crop skin long enough to cover the opening. Insert your finger, and detach the liver and gut; cut off the vent and remove the gut. Then insert a hook, and carefully pull out the gizzard and liver, taking great care not to break the gall bladder. Cut off the legs at the first joint; cut the breast bone through at each side close to the back; then draw the legs up to the crop, and beat the breast bone flat with a rolling pin. Skewer the legs and wings firmly—one skewer fastening the two legs by the middle joint, and another the wings. Fowls are trussed in a similar manner, except that the nails only, and not the feet, are cut off, and that the skewers are put in the first joint of each pinion, and the middle of the leg—brought close to it—and into the body. This is done at each side. A string round the legs keeps them firmer. Pheasants, partridges, and all kinds of moor game are trussed for boiling same as fowls.

Turkey.—Stuff the crop with bread-crumbs, a few pounded sweet herbs, a shredded anchovy, butter or suet, lemon-peel, nutmeg, salt and pepper to taste, bound with an egg. Put into boiling water, simmer gently for an hour and a half to two hours, according to size. Skim carefully, and serve with parsley and butter, or mushroom, or oyster sauce. Pickled pork, ham, tongue, or bacon, must accompany this dish.

Chicken and Fowl.—Boil as turkey. A chicken will take about half an hour after the water boils, and a good sized fowl nearly an hour. Serve with parsley and butter, or with the following sauce:—Melt in a teacupful of

milk a large table-spoonful of butter kneaded in flour, beat up the yolk of an egg with a little cream, stir it into the butter, and heat over the fire, stirring continually. Ham, tongue or pickled pork must be served with boiled fowl. If boiled in a cloth a few slices of lemon should be placed on the breast, and the bird covered with buttered writing paper.

Another way of boiling a Fowl is to soak it in milk one hour, tie it up in a cloth and put cold water in a saucepan, place your fowl in, and put on a slow fire; when boiling, remove it, and let simmer for about twenty minutes; then remove it altogether, and let it remain in the water ten minutes more. Serve with parsley chopped fine into some melted butter, a little salt, pepper, and some juice of lemon poured over; with the usual adjuncts.

Boiled Fowl and Rice.—Have some good clear mutton broth boiling in your saucepan; put in the fowl so that it is entirely covered; add one large onion, a little mace, bruised, pepper and salt. Let the whole simmer gently for about half an hour, when add one-third of a pound of well washed and soaked rice. When the rice is soft and tender, take it out, strain it, and put it in the oven for a few minutes to dry. Your fowl being done, serve very hot with the rice in the dish, and parsley and butter separate.

Another method is to stuff the fowl with two dozen bearded oysters, and put in a jar. The jar should then be placed in a saucepan of boiling water, and *boiled* for nearly two hours. Take another dozen of oysters, scald them in their own liquor, add a gill of cream and the yolks of three eggs beaten. Mix with the gravy from the fowl, and serve very hot.

Rabbit.—Soak for a quarter of an hour in warm water. Either boil plain and serve with pickled pork or boiled ham, or prepare thus:—thicken the water in which it is to boil with a bit of butter covered with flour, and just as it boils, add a pint of milk, with salt and whole pepper; then put in the rabbit, with a quantity of onions cut into quarters, and stew gently until the rabbit is tender, from half to one hour according to size; when ready, take out the onions, put into a separate saucepan with a little milk, butter, flour, and salt; when the sauce is well mixed, dish the rabbit, and pour the sauce over it. Mushrooms may be substituted for onions.

Goose laid in a dish for a couple of hours, with a pint of boiling milk poured over it, and then boiled, is very delicate, thus: Put it into boiling water, and let it simmer until very tender. Then serve, smothered with onions and cream.

Duck can also be cooked in this way.

Partridges, Pheasants, &c., are seldom boiled. Dress like fowl, and do not stuff them. Parsley and butter, with just a *soupçon* of cayenne pepper, should be served in a tureen; and a sauce made of chopped parsley, half a pint of cream, with a little fresh butter, stirred together, and poured over the birds. If preferred, celery heads, cut fine, can take the place of the parsley.

Boiling Fish.

Put fish into *cold* water to boil, unless the fish are small, when *warm* water is best. Do *not* put into boiling water, unless specially directed.

A little salt and vinegar should be added to the water just before the fish is ready to put in.

Fresh-water fish must always be soaked in strong salt and water before cooking

Fish should always simmer gently, or the outside will break before the inside is done.

A fish plate or strainer should be put in the kettle for the fish to lie upon.

When the fish separates easily from the bone, (which can be ascertained by drawing up the plate), it is done, and must be at once taken out of the water.

Recollect fish must never be served underdone.

Sea water is best, where it can be had, for the boiling of salt-water fish.

The roe and liver should in most cases be placed in the dish by the side of the fish.

Always serve fish on a hot napkin.

Parsley, horseradish, and sliced lemon, are the best garnishings for fish.

Turbot.—Empty, and wash perfectly clean, without breaking the skin; draw a sharp knife through the thickest part of the middle of the back nearly to the bone. Do not cut off the fins; the incision is made to prevent the skin of the white side from cracking. Dissolve in a fish-kettle, in as much *cold* spring water as will cover the fish abundantly, salt, in the proportion of four ounces to the gallon, and a morsel of saltpetre; lay the turbot upon the fish-plate with the white side upwards, place it in the kettle, bring it slowly to boil, and clear off the scum as it rises; simmer until done, then lift it out, drain and dish very hot, with a hot napkin neatly arranged over the drainer. Serve with rich lobster sauce, good plain melted butter, and a dish of dressed cucumber. For a small dinner, anchovy, or shrimp-sauce is served. Should there be any cracks in the skin of fish, branches of curled parsley may be laid over them. Garnish with a slice of lemon and a tuft of curled parsley, placed alternately round the edge of the dish; or a border of fried smelts. From fifteen to twenty minutes will usually boil a moderate sized fish, and from twenty to thirty a large one. Turbot is improved by being kept a day or so before cooking, if the weather be not very hot.

Salmon.—When the fish is scaled and cleaned, put it into the kettle with cold water, (with six to eight ounces of salt to each gallon), enough to quite cover it. Let it boil up pretty quickly, skim, and simmer until done. Then take it out and serve on a hot napkin, garnish with parsley and sliced lemon. Lobster sauce, shrimp sauce, and plain melted butter, (*see* receipts), may all accompany this dish, as well as cucumber, either dressed or plain.

Another, and by some considered a better way of boiling salmon, is to cut it in slices two inches thick, and simmer gently for about twenty minutes, and then serve as before.

Many cooks advise putting salmon into *boiling* water, as it then eats firmer. Often, however, a fish cooked thus comes to table very hard.

Collared Salmon.—A thick slice, about four pounds, of a large fish is best; which is to be cut open, boned, and scaled.. Then rub it all over with a seasoning of pounded mace, pepper, and salt, roll it up and tie. Simmer gently for about an hour in water (with a proportion of one-fourth vinegar), in which a few bay leaves have been thrown. Serve with anchovy sauce (*see* receipt), or plain melted butter.

Salmon is also plain boiled in slices of two to three inches thick. It should be soaked in strong salt and water for half an hour, put into boiling water, simmered for about twenty minutes, with some horseradish in the water; and served the same as if boiled whole.

Brill is boiled same as turbot.

Carp with vinegar.—Put into the kettle entire, with enough boiling vinegar to cover it; simmer for an hour or more, according to size. Serve with parsley, without any of the liquid. Carp dressed in this way, however, is best eaten cold.

Carp may also be boiled plain, and served with parsley and butter.

Cod is seldom boiled whole, as a good sized head and shoulders is sufficient for a dish. *To boil the head and shoulders*, first clean, and then rub salt over the thickest parts and inside, and let it remain so for a couple of hours. Tie it up with broad tape, and put it on in cold water (with half a pound of salt to the gallon), sufficient to cover it. When the water boils, (some cooks prefer to put a large head and shoulders into boiling water), draw the kettle to the corner of the fire, and let it simmer slowly for about twenty to twenty-five minutes. Skim very carefully. Serve on a hot napkin with horseradish and sliced lemon.

Oyster sauce and plain melted butter must accompany.

Cod is very often boiled in slices, which should soak in a mixture of salt vinegar and water for nearly an hour. Boil as before, only not so long.

Salt Cod should be obtained the day before wanted, and put into cold water with a little vinegar, and allowed to soak all night. Then put it on in cold water. Do not let it boil, but simmer gently until tender (say one hour). Skim frequently. Serve on a hot napkin in a dish garnished with hard-boiled eggs sliced, and parsley. Egg-sauce (*see* receipt), and boiled parsnips should be served with it.

Salt Cod with Cream.—Soak as above, and boil without vinegar, when done pull into flakes, pour half a pint of rich cream over it, and serve with egg sauce, and parsley and butter.

Cod's Sounds should be soaked in salt and water for a short time, and then well washed. Boil quite tender in milk and water, and serve with egg sauce.

John Dory is best dressed same as turbot (which *see*) except that the fins are cut off. An average sized fish should simmer for about fifteen minutes after the water boils. Serve with either anchovy, shrimp, or lobster sauce. It is best kept for two days before cooking.

Eels.—The smaller ones are best for boiling. Put them—well cleaned and skinned—into warm water, with a bunch of parsley, simmer until tender (say half an hour). Serve with parsley and butter.

Collared Eel.—Take a large eel, bone and skin it, and dust over it a mixture of finely powdered mace, cloves, and allspice, a few sage leaves and sweet herbs chopped very small, salt and pepper. Roll up, tie with tape and boil till tender. Serve with plain melted butter.

Lampreys are dressed like eels.

Flounders are boiled plain in water, with a little salt and vinegar. Let them simmer slowly for five or six minutes; serve with parsley and butter.

Gurnet should simmer gently for about half an hour. Serve with anchovy sauce. The fins must be cut off.

Haddock may be plain boiled thus—Put them on in *boiling* water, with a handful of salt; when done, they will rise to the surface, and must be immediately taken up; skim well while boiling; serve with melted butter, shrimp sauce, cream sauce, or anchovy sauce.

Another way is to make a few cuts on each side of the fish, and let it remain *in salt* for an hour or two—according to size; put into boiling water and simmer till tender. A fish of five pounds will take about half an hour. Garnish with parsley, and serve with egg sauce and boiled parsnips.

Whiting and Hake are dressed like haddock.

Tunny may be boiled like salmon.

Mackerel should be allowed to soak in salt and water for a quarter of an hour. Then put them on in *hot* water, with a little salt, and simmer gently for about half an hour. When done the tails will split. The dish on which the fish is served should be garnished with fennel, and a sauce served with them of melted butter with chopped fennel or parsley, or green gooseberry sauce (*see* receipt). Anchovy sauce is sometimes served. Mackerel may be filleted, plain boiled, and served with parsley and butter.

Mackerel Soused.—When the mackerel are boiled, put half a pint of vinegar to a quart of the liquor in which the fish have been boiled, half an ounce of whole black pepper, two or three bay leaves, and a little mace; let boil together for a short time, and when cold, pour it over the mackerel.

Grey Mullet.—Boil plain; put into cold water,—unless small, when hot water is best; simmer until very tender, and serve with anchovy sauce and plain melted butter.

Red Mullet is never boiled.

Perch.—Boil as directed for carp. About ten to fifteen minutes' gentle simmering will suffice.

Pike must be scaled and have the gills removed, and be well washed—

first in vinegar and water, and then in plain cold water. Make a stuffing of grated bread crumbs, butter, a few oysters, and a little parsley chopped very fine, some onions, pepper, salt, some fine herbs dried and rubbed to powder, binding the whole with an egg; fill the inside and gills with this stuffing, and sew the fish up, and put on in boiling salt and water, with a little vinegar in it, and simmer for half an hour to one hour, according to size. Serve with melted butter and anchovy or oyster sauce. The tail is usually skewered in the mouth.

Plaice should be plain boiled like turbot, and served with melted butter.

Skate.—This fish is either boiled plain, or crimped, and served with melted butter, lobster or caper sauce.

Crimped Skate is the most firm. The fish is crimped by drawing a knife through it, in lines, when first caught. Skate *must* be well done. It is dangerous to eat it out of season.

Soles should be thoroughly washed and then plain boiled as directed for turbot. Serve with shrimp or lobster sauce, and plain melted butter. They will require from five to ten minutes simmering — according to size—after the water boils.

Herrings.—Simmer for about twenty minutes. Serve with the following sauce: put half a gill of cream in a little stewpan, and when it boils add to it two tablespoonfuls of melted butter, a bit of fresh butter, and a little lemon juice, pepper and salt.

Tench.—Boil as directed for carp.

Trout and Salmon Trout can both be boiled thus:—Put in *boiling* water, made pretty salt, and boil fast for about fifteen to twenty minutes; serve with melted butter.

Lobster. — Put into boiling water with a little salt, and keep boiling for twenty to forty-five minutes, according to size, skimming well. Lobsters are spolt if done too much or not done enough, so that great care is necessary. A little sweet oil rubbed over the shell when done and then wiped off again, improves the appearance.

Crayfish.—An averaged sized fish will be done in fifteen to twenty minutes if put into boiling water.

Crab is boiled in the same way.

Shrimps.—The following is Soyer's plan. To one gallon of water put two ounces of salt, one spring of lemon thyme, one of mint, and a bayleaf. Boil. When boiling hard put one quart of shrimps into an open wire or wicker basket, which place in the water. The time the shrimps take to boil depends upon their size; but it may be known by their changing colour. If boiled too much they are tasteless and indigestible.

Stewing.

For stewing meat should be put into *cold* water, only just sufficient to cover it. When it comes to the boil it must be carefully skimmed until no more scum rises, and then allowed to simmer very gently until the meat becomes perfectly tender, and the gelatinous parts partially dissolved.

A stew must *never* boil.

Stewing does not require either so much water or so great a heat as boiling: it is the most economical of all modes of cooking, as many coarse meats, old poultry, and game, and different parts of animals, which, cooked any other way, would be uneatable, are rendered nutritious and savoury. By stewing we obtain all the nutritious elements of food, some of which are lost in roasting and boiling.

Slow cooking is necessary, and meat may even be stewed over and over again, without injury, until it is sufficiently tender.

Earthenware vessels are better than metal ones, because they are longer getting hot, but retain their heat for a greater length of time.

The quantity of water should be regulated by the kind of meat stewed.

Salt is an invariable adjunct to stews.

Rump of Beef.—About half a rump makes an excellent dish. Remove the bone, and tie up with broad tape. Put into a stew-pan with just enough stock (which *see*) to cover it. Add whatever vegetables are liked—sliced—such as onions, carrots, or turnips,

and flavour the stock with cloves, savoury herbs, vinegar, catsup, pepper and salt. The whole must then be allowed to simmer very gently until perfectly tender (from four to five hours), keeping it skimmed. When done strain the gravy the meat was boiled in, and thicken with a little butter and flour, put in a glass of port, Madeira, or other rich wine, let it boil up, and serve over the meat, very hot; garnish the dish with forcemeat balls and the vegetables boiled with the meat.

Brisket of Beef.—Stew like rump.

Shin of Beef.—Saw the bone in several pieces, put the meat in stock or water; when it boils, skim, and add a head of celery, a bunch of savoury herbs, pepper, salt and allspice to taste. Cut up a few onions, carrots and turnips, and boil them till tender. When the beef is quite tender (say four hours) take out the liquor, and thicken half of it with butter and flour, season with pepper and salt; add a glass each of catsup and port wine, boil up, pour over the meat, and serve very hot, on a dish garnished with the boiled vegetables.

Any part of the ox may be stewed by cutting it into small pieces and gently simmering till tender with a little mace, cloves, and herbs. When half done add sliced vegetables, and if liked, parsley. Barley or rice may be added, as thickening to the stock.

Irish Stew.—To about three pounds of breast, loin, or neck of mutton, cut into moderate sized pieces, put six pounds of potatos and six or eight large onions, peeled and cut into thick slices. Put into a stewpan and add pepper and salt to taste. Pour over it about one to one and a half pint of water, and stew very gently, *with the lid on always*, until quite tender (say two to three hours). Shake the pan now and then to prevent burning. Serve very hot. This dish may also be prepared by putting exactly the same ingredients in a jar instead of a stewpan, and baking in a moderate oven for about two hours, or until quite tender.

Breast of Lamb or Mutton.—Cut in pieces, and stew very gently for about an hour and a quarter to an hour and three quarters, in good stock, sufficient to cover it. When done thicken the stock with butter and flour, add a glass of sherry or other white wine, boil up, and pour over the meat. Green peas, spinach, or mushrooms, may be stewed with this dish, and much improve it.

Breast of Veal.—Cut in pieces and fry to a good brown. Then turn into a stewpan with a little butter, savoury herbs, pounded mace, onions, cloves, allspice, and grated lemon-peel, pepper and salt to taste. Cover the meat with water, and stew gently for about a couple of hours. Then thicken the gravy with butter and flour, add a couple of glasses of sherry, a tablespoonful each of catsup and tomato sauce, pour over the meat and serve. Green peas boiled separately may be served in the same dish, or they may be stewed with the veal.

Fillet of Veal may be stewed whole with the same additions as above, a little lemon-juice and a dozen mushrooms. This joint must be stuffed with forcemeat and stewed *very* gently. Half an hour per pound should be allowed.

Knuckle of Veal should be stewed plain for an hour, and then have added half a pound of rice or macaroni, and the whole simmer for two hours longer. Serve with boiled bacon, and parsley and butter.

Neck of Veal.—Bake for half an hour in a brisk oven, and put in a stewpan of boiling water, with a few young carrots, green onions, and new potatos, and a bunch of savoury herbs. Stew for two hours. Serve with boiled green peas and forcemeat balls.

Stewing Poultry, &c.

Pigeons may be stewed with fat bacon. The livers should be minced and added to the stock, the gravy thickened as before, and flavoured with a little port wine or catsup. They will take about half an hour.

Ducklings, Rabbits, can also be dressed in this manner. Forcemeat balls and a few onions may be added just before done.

Venison.—The shoulder is the best

joint. Bone and put into a pan rolled and tied up with slices of mutton or lamb fat, which have been soaked in port wine, seasoned with allspice and whole pepper. Stew in good stock with a gill of port wine, till quite tender (say three hours and a half to four hours), and serve with the gravy over it, with red currant jelly.

Stewing Fish.

Carp.—Put into a stewpan a quart of water and a bottle of port wine (or half these quantities, according to size of fish), add a little mace, fine herbs, young onions, pepper and salt, and a scraped horse-radish; simmer very gently for an hour, or until tender, then take out the carp and drain into another pan, put a pint of port wine, two shreded anchovies, an onion, a little lemon juice, a quarter of a pound of butter rubbed in flour, a little cream, and a half a pint of the liquor in which the carp were boiled; boil together for a few minutes, then add the yolks of two eggs with cream, and juice of half a lemon; dish with the sauce.

Salt Cod.—Put into a strong earthenware dish a slice of butter, some parsley and green onions chopped, pepper, and a few capers; place the fish in layers in the dish, covering each with the seasoning. When the dish is full cover with bread crumbs; stew gently over hot ashes until quite tender, and brown with a salamander.

Eels.—Clean and skin the fish and cut into pieces of three inches long, soak in strong salt and water for one hour. Dry with a cloth and fry them brown. Then put them in a stewpan with a pint of good stock—boiling—with a gill of port wine, a little essence of anchovy, lemon-juice, and cayenne, mace, salt and pepper to taste. Stew gently for about half an hour, and serve with gravy over them, very hot.

Another Method is, after cleaning, cutting, and soaking them, to take an onion, two or three shallots, a little thyme, parsley, two or three bay leaves, pepper, a pint of gravy, half a pint of vinegar, and four bruised anchovies, put the whole, with a pint of port or French red wine, into a stewpan, and let them boil for about ten minutes, when take out the fish; let the sauce continue boiling until considerably reduced; thicken as before directed and serve.

Or—Cream may be added to the gravy just before done.

Lobster.—Take all the meat of cold lobsters, and have ready a gravy, made by boiling the shells, previously pounded roughly, for a long time in water; strain this liquor, and season it with pepper, salt, and mace; thicken with flour and butter, and when thoroughly hot, put on the lobster, and heat it up; just before serving add a little lemon juice. Serve very hot.

Salmon.—When the fish is cleaned, cut it into slices, and stew gently in a rich white gravy. A little before serving, add two tablespoonfuls of soy, one of essence of anchovy, salt, some chopped parsley, and chives.

Oysters.—Scald one dozen oysters in their own liquor, and beard them. Put into a stewpan a little butter and sufficient flour to cover it, and the liquor of the oysters, strained, flavoured with a blade of mace. When this boils add the oysters, a gill of cream, salt and cayenne to taste. Simmer for a couple of minutes, and serve with toast.

Turbot.—Make a seasoning of a pound of fresh butter, a little salt, pepper and nutmeg, parsley and mushrooms chopped, a chopped shallot, and the juice of two lemons; cover the bottom of the fish kettle with a portion of this mixture, then put in the fish, and cover it with the remainder; add a bottle of French white wine, and let the whole stew very gently for an hour.

Whiting.—Put into a stewpan with a little fresh butter and chopped parsley, salt, pepper, and nutmeg to taste; moisten from time to time with butter and white wine; when done on one side, turn; when done, thicken with flour and butter, adding a little lemon juice.

Trout.—Wash and dry thoroughly, and cut into thick slices; put them in the pan with a little good stock, salt, pepper and lemon juice, and let

it simmer until quite reduced; then dish up the fish with a sauce made thus :—Put into a pan some crumb of bread, with a little butter, some parsley, shallots chopped very fine, pepper, salt, two or three cloves, a little nutmeg grated, a glass of French white wine, and one of good gravy; let it boil until it becomes thick. Dish very hot.

[*Hashes.*—See Cold Meat Cookery.]

Frying.

How to Fry.—Perhaps of all modes of cookery frying is the least nutritious and economical. All kinds of meats and vegetables may, however, be fried and made tasty. The frying-pan should be sufficiently large to allow the meat to lie flat at the bottom; and the fire should be brisk, clear, and free from blaze. If the meat to be fried is fat, the pan will need only to be greased to prevent sticking; but in the case of veal cutlets, and other lean meats, butter, dripping, lard, or bacon will be necessary. Salt fat, from the liquor of boiling meat is apt to fly and spurt, and therefore is unfit for frying; but fat used for frying will, if strained, serve for the same purpose again and again. Meat for frying should be slightly salted, peppered and floured, and when done, laid on a hot dish and the fat poured off for further use. If *onions or other vegetables* are to be fried, place them in the pan directly after the meat is removed and fry in the fat. When they are brown, pour off the fat, as before. For *gravies* made in the frying pan there are many receipts. This is a *good plain gravy:* —A teacup or more of cold gravy, broth, or water, with a spoonful of ketchup or Worcester sauce, and a bit of butter the size of a walnut rolled in as much flour as it will carry; set on the fire and kept well shaken in the pan, till the gravy is smooth and thick.

Bacon or Ham should be scalded a minute or two in water in the frying pan. When the fat begins to run and becomes transparent, pour off the liquor and brown the meat in its own fat. *Liver* should be fried over a slow fire, as it is apt to fly.

Eggs are fried in a variety of forms, as in bacon fat, omelettes, &c., (for which *see* Receipts). Each egg should be separately broken in a tea cup and gently poured into the pan, that the yolks may remain unbroken in the centre of the whites when the whole is set, and the lower part fried to a delicate brown, take up each separately with a slice. (*See* Omelettes.)

Fish to be fried should be dry and well floured; or they may be rubbed with white of egg and covered with fine bread crumbs. All kinds of fish require much more fat than meats or vegetables: the fat may, however, be used for fish over and over again. Turn fish in the pan with a slice, and be careful in taking them up that they do not break.

Sautéing is a mode of frying in a deep kind of frying-pan, or shallow saucepan, generally lined with earthenware. A moderate or small quantity of fat only is required. When it boils, put in the meat, &c., and keep the pan in motion till its contents are properly cooked. Chops, steaks, cutlets, pancakes, omelettes, fritters, small game, and poultry, kidneys, sweetbreads, potatoes sliced or cut in dice, vegetables, and fish are all sautéd. The great point is to avoid over cooking, especially if the sautéing be only the preliminary process in the preparation of the dish.

Fish to Fry.—Skate, Soles, Plaice, Flounders, Brill, Mackerel, and fresh-water fish generally, are fried *au naturel,* in fat or butter, and served without sauce, which is added at table according to taste, in a dish garnished with parsley. Fresh-water fish must be laid for an hour or two in a bath of salt and water to remove the earthy flavour.

Crimped Skate.—Lay slices in butter for three or four hours, with salt, pepper, cloves, a little garlic, onions, parsley, and vinegar, near enough to the fire to gently melt the butter. Then take out the slices and fry quickly in butter, and serve on a hot dish garnished with parsley.

Smelts.—Wipe with a clean cloth, but do not wash; dredge with flour, or brush over with yolk of beaten egg

and roll in bread-crumbs, and fry in boiling dripping or lard till thoroughly brown.

Soles.—Take off the brown skin and scrape the other side. Wash well and place them in a cloth to dry; then rub well over with yolk of egg well beaten, and cover with grated bread-crumbs; fry to a good colour in boiling lard, and when done, lay them on a sieve before the fire to dry; serve with melted butter, and shrimp sauce, garnishing the dish with crimped parsley. The sieve may be covered with blotting paper to absorb the fat.

Soles à la Italienne.—Clean, cut off heads and tails. Cover with chopped parsley, salt, pepper, a little powdered nutmeg, adding a good piece of butter, previously warmed. Fry over a quick fire, and turn as soon as one side is done. Serve with Italian sauce.

Soles au Gratin.—Rub a piece of butter on a silver or plated dish; then fry for a short time some chopped fine herbs, eschalots, chopped mushrooms, and salt, and pepper; when nicely browned put them in the dish, and place your soles upon them; cover the soles with grated bread-crumbs; add a little butter, and a small quantity of white wine. Cook gently under a braising pan, or over a slow charcoal fire; but if the latter, brown with a salamander. Serve with slices of lemon, or lemon juice squeezed over just previous to sending to table.

Sprats.—Frying is the best way to cook these delicate fish. Wipe them dry, and flour well before putting them in the pan. Let them almost float in boiling fat or butter, and fry till they are well browned. Sprats are often fried in butter, when they make a nice dish.

Trout.—Cleanse, dredge with flour, rub with beaten yolk of egg, cover with bread-crumbs, fry to a good colour, and serve with melted butter and lemon pickle. Small trout are dressed whole. In some parts of Scotland, trout are rubbed with oatmeal instead of flour, and some consider this improves the flavour.

Herrings.—Scale, cut off the fins, gut, and wipe dry, leaving in the roe or melt. Dredge with flour, and fry in boiling lard or oil to a good colour. Drain before the fire, and serve hot with melted butter, or parsley and butter. Some are partial to an onion sliced up and put into a sauce-boat, and boiling water poured over it, seasoned with pepper and salt.

Eels.—Cleanse; cut into pieces of about three inches, scored across in two or three places without separating them; dust with flour, and fry in boiling lard to a good brown, or dip in a batter, sprinkle with finely grated bread-crumbs, fry, and serve with melted butter.

Lampreys are fried, boiled, or sautéd like eels.

Gudgeons are always fried; much used in France, though somewhat insipid. Flour well, and fry in a deep pan, with plenty of fat.

Whiting.—After being scaled and cleansed, cut into steaks, and fry with bread-crumbs in boiling fat, till brown. Small whiting are generally served curled with their tails in their eye-sockets.

Whitebait.—This delicate little fish must be eaten fresh. Drain, and smother in flour; shake off the superfluous flour, fry in a pan of boiling lard till very slightly coloured. If browned they are ruined. When cooked, lay them on a sieve, covered with blotting paper to absorb the fat, before the fire. Dish very hot in a heap, with salt and pepper. Serve with halved lemons and brown bread and butter.

Devilled Whitebait are cooked in the same way, with Cayenne pepper. In both cases they should be hot, crisp, and free from fat.

Oysters.—Boil for a minute in their own liquor and drain; fry in butter, seasoned with catsup, lemon-peel, and parsley, over a quick fire, and serve hot with fried potatos.

Broiling and Grilling.

How to broil economically.—Meats, fish, small poultry, and game may be broiled as a variety in cooking. First you must have a good clean fire, without blaze; then set on your gridiron,

and when the bars are hot through, wipe them thoroughly with a clean rag or paper, and rub them with a morsel of suet or dripping to prevent the meat from sticking. Meat for broiling should be from half an inch to an inch thick : if thinner, it will be dry and hard ; if thicker, the outside will be brown before the middle is sufficiently done. In broiling, meat should be frequently turned, and for this purpose a small pair of tongs is necessary, as the wound made by a fork lets out the gravy. Rump steaks, mutton and pork chops, and several kinds of fish are best broiled. The part of the ox, called *beef-skirt*, should be turned only once, when half done, and then peppered and salted to taste. Never cut broiling meat to see if it is done. That can be better ascertained by the smell, and by the little jets of steam from the meat. This also applies to all roast. Hot plates or dishes should be ready to receive the broil immediately it is fit to come from the fire. A bit of butter rubbed on a *broiled steak* in the dish will draw out the gravy and add to its appearance. Catsup and other sauces should be added hot in the dish. Though not the most economical mode of cooking, broiling is a decidedly toothsome, wholesome, and pleasant one, especially agreeable to invalids and children.

Broiled Fowl.—Truss as for boiling, cut out the back-bone and press quite flat, season well with pepper, salt, and chopped shallots or small onions ; fry upon both sides, take out, egg over with a paste-brush, dip into bread-crumbs, place upon a gridiron, over a moderate fire, and broil a very light brown colour, and serve with a little plain gravy, or mushroom sauce—of button mushrooms, simmered for ten minutes, with two tablespoonfuls of catsup and two of Harvey sauce, and a pat of butter. Pour the sauce in the dish over the fowl, and serve.

Spitchcocked Eels.—Cut large eels into pieces three or four inches long ; sprinkle with pepper and salt, beat up an egg, dip them into it, and cover them afterwards with a mixture of bread crumbs, chopped parsley, and pepper and salt ; broil and serve with melted butter, parsley and butter, or with mustard sauce.

Whiting.—Prepare as for frying, and cook on a gridiron, rubbing them over before serving with a little cold butter.

Sturgeon and Turbot Steaks.—Cut into steaks, season with pepper and salt in melted butter, and cover with bread crumbs, after having rubbed them over with yolks of egg well beaten ; broil to a good colour, and serve with rich sauce, or melted butter. To make them look best at table, they should be broiled in buttered paper.

Kippered or Dried Salmon.—Cut up the back and take out the bone ; wipe clean, score the fish, pepper and broil. *Salmon Steaks* are broiled in buttered paper or between slices of bread, over a slow fire. Serve with melted butter and savoury sauce.

Mackerel.—Clean, split, wipe dry, pepper and salt and broil thoroughly. The French broil mackerel in buttered paper, and serve with chopped herbs and melted butter. A small mackerel will take about ten minutes to broil.

Game is broiled and served in various ways, for which *see* receipts.

Braising.

Braising is a favourite mode of cooking in France. It requires the fire both above and below the article to be cooked. The braising-pan is nearly air tight, the top filled with live coal or charcoal -- the word *braise* meaning the wood left partially burnt in the oven. The process should be conducted slowly. Everything braised should be thoroughly done. Braised mutton, beef, game, &c. is particularly grateful to invalids and epicures.

Toasting.

How to Toast.—Bread for buttered toast, sippets for made dishes, game, toast and water, &c., should be held pretty close to a bright fire and frequently turned ; the whole success of the process being found in its likeness to roasting.

Savoury Toast.—Cut slices of bread free from crust, about half an inch thick and two inches and a half square ; butter the tops thickly, spread

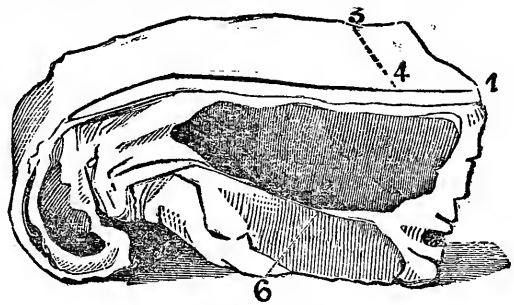
a little mustard on them, and then cover them with a deep layer of grated cheese and ham, seasoned with cayenne; fry in butter, but do not turn them in the pan; place in a Dutch oven for four minutes to dissolve the cheese. Serve very hot.

Welsh Rarebits are served on toast. *Toasted* cheese is prepared in a patty-pan and toasted before a clear fire.

Carving.

How to Carve.—It is important that everyone, especially the head of every family, should know how to carve a joint of meat, a head of game, a fowl, or other kind of poultry; for what can be more awkward than to be placed before a dish without being able to help it properly? Good carving is also economical; for a joint well carved may be thoroughly served without an ounce being wasted, while everyone at table gets a due proportion of well-done and under-done, fat and lean, tit-bit and gravy. Carving requires some knowledge of the nature of the joint or the anatomy of the birds, fish, hare, &c., usually eaten as food. It also requires nerve, steadiness, and practice. Never stand up to carve; nothing is more vulgar. Let your knife be sharp, but not your temper; and whenever you have to carve for a large party remember that expedition is a sort of grace of itself.

Sirloin of Beef.—The ordinary way to carve this famous joint is to cut from the chine-bone to the flap, directly in the centre, helping slices from either side, giving a piece of fat with every plate. But a more economical plan is to cut thin slices from the chine-bone downwards. Some persons prefer the under side or fillet. In the latter case the fillet side is laid uppermost in the dish, the under-cut is best when hot, the upper part may be cut in the direction of the line lengthwise (1—2), or downwards 3—4; when, if the party be large, slices from the under-cut (6—6) may be helped.

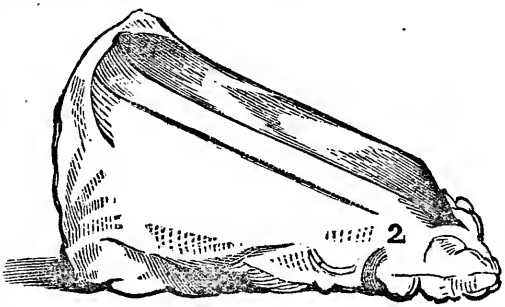


SIRLOIN OF BEEF.

Ribs of Beef.—Cut same as sirloin; but as it has no under-cut, it may be cut in thin slices from the thick end to the flap, with slices of the latter.

Round of Beef.—After removing a slice all round, cut thin slices evenly so as not to disfigure the joint; helping fat with each plate.

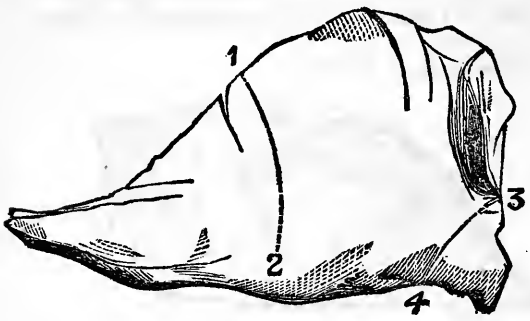
Aitchbone of Beef. — This joint is sometimes roasted; but whether roasted or boiled, it is carved in a very simple manner, by slices from 1 to 2; with a portion of the fat from the under side.



AITCHBONE OF BEEF.

Brisket of Beef.—Cut lengthwise down to the bone, after removing the outside slice; the soft fat lies beneath. Avoid all ragged or jagged cuts, which spoil the look of the joint when cold.

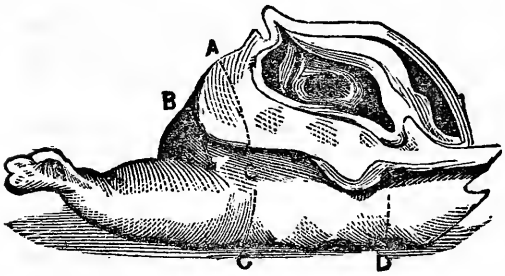
Tongue.—Begin three inches from the tip, serve thin slanting slices, with a portion of the fat at the root with every plate.



ROAST LEG OF MUTTON.

Roast Leg of Mutton.—This favourite joint is always placed on the table as in the engraving. Cut slices in the line 1, 2, with small pieces of fat at 3. Some persons carve a leg of mutton like a ham, in slices towards the middle, which is an economical plan, and leaves the cold joint of a good shape.

Boiled Leg of Mutton.—This is sent to table with fat side uppermost. The wether leg has a round lump of fat at the edge of the broadest part, *a*. The best part of the joint is in the middle, between the knuckle and further end, *b*. Begin by cutting thin deep slices as far as *c*. Take slices of fat from the end. Many prefer the knuckle part, which is in general tender. Good slices may be cut on the back of the leg; turn it up, and cut at the broad end, longways, different from the direction taken on the opposite side. For the cramp-bone, cut down to the thigh-bone, at *d*; then pass the knife under the cramp-bone.

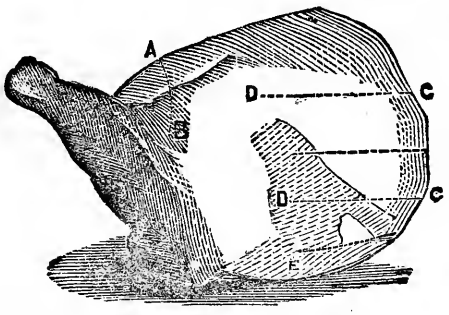


BOILED LEG OF MUTTON.

Haunch of Mutton.—Make a deep cut down to the bone near the knuckle, which will let the gravy escape. Then cut slices lengthwise from the cross-cut to the end.

Saddle of Mutton.—This, the best joint of the sheep, consists of the two loins. It is to be carved by making a deep cut from end to end, right through the middle, and serving slices on either side, with a portion of fat to each. Some carvers take slices from the thick part obliquely.

Loin of Mutton.—Carve in chops, which should be easily removed if the butcher has properly chopped the bones.



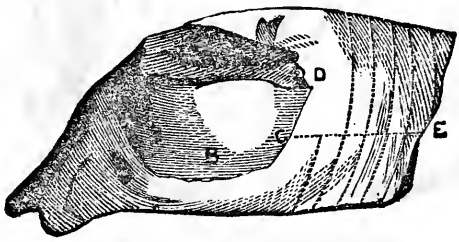
SHOULDER OF MUTTON

Shoulder of Mutton — Is usually served with the back part uppermost. Cut in the hollow part from *a* to *b*, and the knife should pass down to the bone. The best fat is on the outside edge, and should be cut in the direction *e*, in thin slices. When many persons are at table, and the hollow part *a*, *b*, is cut out, some nice slices may be obtained on each side of the blade-bone from *c* to *d*. The space between the two dotted

lines is the blade-bone, and cannot be cut across.—On the under side, there are two parts full of gravy ; the other lean.

Haunch of Venison is carved like Haunch of Mutton.

Fore Quarter of Lamb.—Remove the shoulder from the breast and ribs, by passing your knife in the direction *a, b, c, d*, keeping it towards you in a horizontal position. Lay the shoulder aside or in another dish. Squeeze the juice of a lemon, on the other part, with a little pepper and salt; then divide the gristly part from the ribs in the direction *e c;* and help either from that or the ribs as desired.



FORE QUARTER OF LAMB.

Breast of Veal.—The richest part is called the brisket. Insert the knife about four inches from the brisket, and cut through so as to separate it from the ribs. Then serve according to the taste of the company. The sweetbread is usually sent to table with this joint.

Knuckle of Veal.—Begin at the thick end and cut downwards, not too thin.

Fillet of Veal is carved like round of beef; the slices should be even and rather thin. Help stuffing with each portion.

Loin of Veal.—Carve same as loin of mutton.

Calf's Head.—Cut long thin slices of the cheek lengthways, and help with a little bit of neck, ear, or palate. The tongue and brains are served separate.

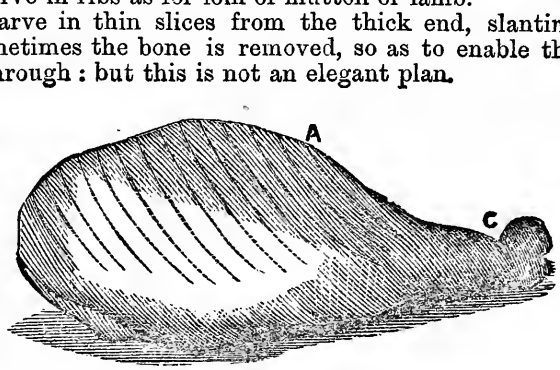
Roast Sucking Pig.—Before bringing to table the head is taken off and divided. The body is also divided from end to end. At table the carver first removes the legs and shoulders. This is easily done if the knife be sharp and held flat. Then the ribs, which are esteemed the best parts, are cut in slices, and served with the regular sauce or stuffing.

Roast Leg of Pork.—When cooked with the crackling on, the latter should have been well scored. Carve in slices through the thickness of the joint.

Roast Loin of Pork.—Carve in ribs as for loin of mutton or lamb.

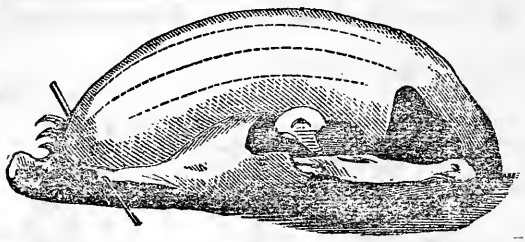
Boiled Leg of Pork.—Carve in thin slices from the thick end, slanting towards the knuckle. Sometimes the bone is removed, so as to enable the carver to cut slices right through : but this is not an elegant plan.

Ham.—There are various ways of carving a ham; but the best and most usual is to begin in the middle by taking long thin slices from *a* to *b*, through the thick fat. By this plan we get to the prime part at once. A more economical way is to cut thin circular slices from *a* to *c*. The former is the better way for hot, and the latter for cold ham.



HAM.

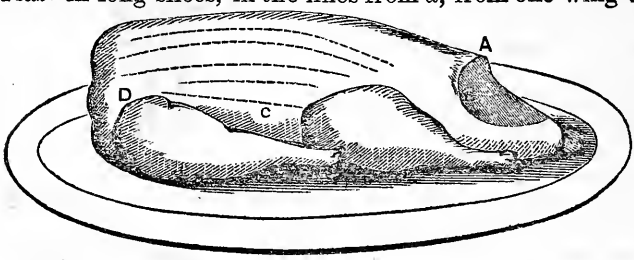
Turkey.—Whether roasted or boiled, a turkey is served up like a fowl, and cut up in the same way as a pheasant. The best parts are the breast, wings, and neck-bones. The neck itself is taken away, and the cavity under the breast, stuffed with forcemeat, which must be cut into thin slices from the



TURKEY.

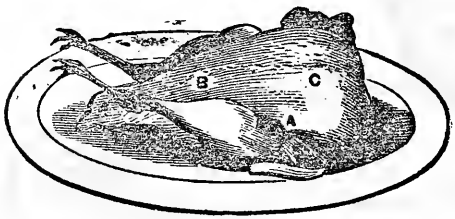
rump to the neck, and a portion given with each piece of the turkey. The common practice is not to cut up more than the breast, or one of the wings; but this must be regulated by circumstances, and the number of guests at table.

Goose.—Remove the apron in the direction *a*, *b*, pour into the body a glass of port wine, and a large spoonful of mustard, previously mixed. Bring the neck end toward you, and cut the breast in long slices, in the lines from *d*, from one wing to another. In taking off the leg, put the fork into the small end of the bone, pressing it to the body, and having passed the knife at *d*, turn the leg back, and if the goose be young, the joint will easily separate. To take off the wing, put the fork into the small end of the pinion, and press it close; then insert the knife at *d*, and divide the joint by cutting down from the direction *d*. The best parts of the goose are the slices on the breast; the flesh of the wing, divided from the pinion; the thigh-bone, which may be separated easily from the drum-stick or bone of the leg; the pinion, and next the side-bones. Take sage and onion stuffing from the body with a spoon, at the place where the apron lay, and then mix with the gravy, which should be poured into the goose before any person is served.



GOOSE.

Fowls.—The legs of a boiled fowl are bent inward, and tucked under with skewers, which must be removed. Separate the wing in the direction of *a* to *b*; first dividing the joint; and then with your fork lift up the pinion, and draw the wing towards the legs, and the muscles will part better than if cut. Insert the knife between the leg and body, and cut to the bone; then turn the leg back, and the joint will yield easily, if the fowl be young. When the quarters are removed, take off the merrythought from *a*; and then the neck bones, by putting the knife in at *c*, and pressing it under the long broad part of the bone, in the direction of *c*, *b*; lift it up, and break it off from the part that adheres to the breast. To divide this from the carcase, cut through the tender ribs, close down to the end. Next lay the back upwards; the knife next the bone, half way from the neck to the rump, and on raising the lower part, it will divide with ease. Turn the rump from you, and take off the two sidesmen,—which completes the process. As each part is taken off, it should be turned neatly on the dish; and care taken, that what is left goes properly from the table.

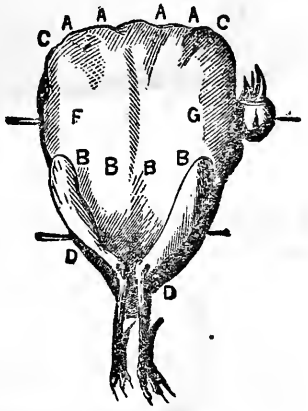


FOWL.

The breast and wings are the choicest parts ; but the legs, in younger fowls, are the most juicy.

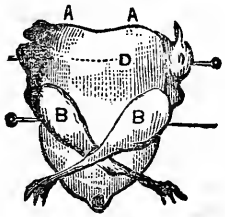
Whether roast or boiled, fowls are carved in the same way.

Pheasant.—Fix your fork in the middle of the breast ; cut down in slices from *a* to *b ;* take off the leg on one side of the line *b d ;* then separate the wing on the same side in the line *c d ;* after which, remove the leg and wing on the opposite side, and then cut off the slices of the breast, which were before divided. In taking off the wings, be careful not to cut too near the neck, as at the point *g* is the bone, from which the wing must be separated. Cut off the merrythought in the direction *f g*, by passing the knife under it towards the neck. The other parts are to be divided as in a fowl. The breast, wings, and merrythought are the most esteemed, but the leg has the richest flavour.



PHEASANT.

Partridge.—Cut off the wings in the line *a b*, and the merrythought in that of *c d*. The parts most preferred are the wings, breast, and merrythought ; but from the smallness of the bird, the two latter are seldom divided. The wing is the best, and the tip of it is by epicures deemed most delicious.



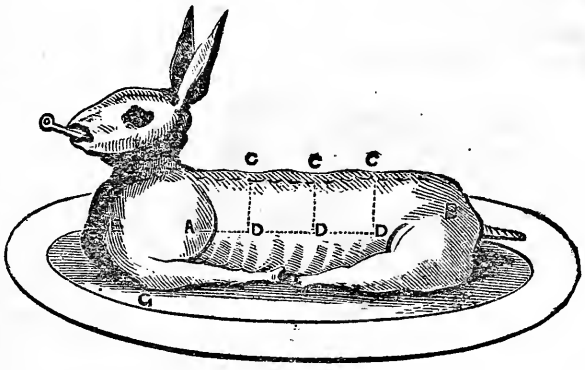
PARTRIDGE.

Pigeons.—Cut in two lengthways and serve a half to each person.

Snipes, Plovers, Woodcocks, Curlews, and other small game should be treated in the same manner. When they are large the wings and legs may be removed and served separately, making six helps of each.

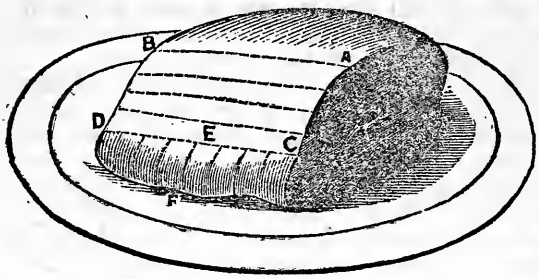
As a rule poultry should never be wholly cut up at table, but simply divided ; but game should, as many prefer the backbone.

Hare.—Put your knife in at *a* and cut down to the rump, on one side of the backbone, in the line *a* to *b*. Do the same thing on the other side. Cut the back into four, as *c d ;* cut the shoulder off as *a e g*. When all your joints are before you help with stuffing to each. When all are served cut off the head, and separate the jaws ; then split the head, and serve the ears and brains as required.



HARE.

Rabbit.—As for hare. Boiled rabbit is jointed, the head divided, and the back cut into three or four pieces, breadthwise; then help, with stuffing to each portion where used.

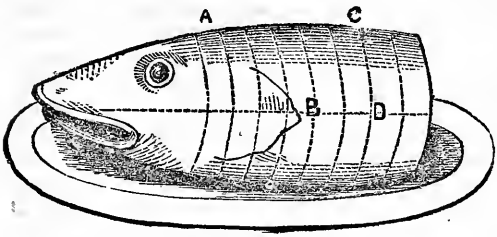


SALMON.

Salmon. — Cut down the middle of the side to the bone lengthways, *a*, *b*, *c*, *d*, and take slices from that cut; serve each portion with a little piece of the belly, *e* to *f*, which is fattest and most delicate.

Cod's Head and Shoulders. —Cut across from the back downwards to the thin part, taking care not to break the flakes; serve a piece of the sound to each person.

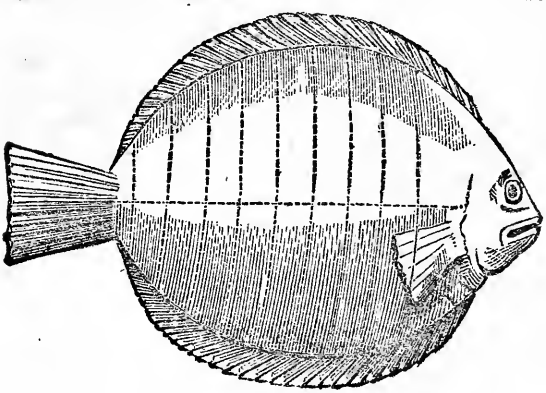
Turbot.—Cut down the middle, from head to tail, to the bone; then from this long cut, help portions by passing your fish slice from the middle to the fin, and serve part of the fin with each; when one side is done lift up the bone and serve the other side same way.



COD'S HEAD AND SHOULDERS.

Brill, John Dory, and all large flat fish are served like turbot.

Mackerel should be divided into four — that is the fish stripped up the middle, and each side divided into two, leaving the bone and head on the dish.



TURBOT.

Eels are cut into small pieces and served a thick and a thin piece together.

Soles, if fried, should be divided quite across; if boiled, serve large ones like turbot, and small ones like mackerel.

Smaller Fish.—Give one to each person.

Whitebait, Gudgeon, and other very small fish must be helped with a fish-spoon.

Soups.

Stock.—All meat soups have "stock" for their basis. Beef and veal make the best stock, but mutton, if previously broiled or roasted, is very good. The *Digester* or *Stock-pot* should be made the receptacle of all sorts of meat-bones, either broken or crushed as the large proportion of gelatinous matter they contain is the basis or jelly of the stock, to which it can be added at pleasure.

Rub a large stewpan, or better still, a fire-proof earthenware jar or pan, with a little butter, and put into it one pound of ham without fat or skin, four pounds of leg or neck of veal, and three pounds of lean beef, all cut into thin slices, or small pieces; set over a clear fire till the meat is equally browned; move it often so that it does not stick to the pan nor burn. Place the bones upon it, and pour in gradually one gallon of cold water. Take off the scum as it rises, and throw in at intervals a little cold water and salt, to bring it quickly to

the surface. When no more scum appears, put in two ounces of salt, three onions, three carrots, two turnips, one head of celery, two ounces of savoury herbs, one dozen of cloves, three-quarters of an ounce of white pepper (whole), and three blades of mace. Allow to simmer gently for five or six hours, and then strain. When cold remove the fat from the top; and in taking out the soup, leave the sediment untouched, and pass the soup through a fine hair sieve. It is then ready for use, and when required, take out the quantity demanded for table, and add a little mushroom catsup or Harvey sauce.

Another good Stock is made thus:—Cut up small a fine knuckle of veal—say seven or seven and a half pounds—and a piece of lean ham—say half to three quarters of a pound. Rub with butter or clarified dripping the bottom of your stewpan (the proper size for this quantity of meat is from two to two and a half gallons). Put your meat into this pan with a little water—say one pint—a handful of salt, two or three onions, a small head of celery, a carrot, or two small ones, and a turnip. Cover your pan, and place over a brisk fire and stir now and then, till a thick white jelly-like substance covers the bottom of the pan. It is then time to add the water, so fill up the pan with *cold* water, and let it remain until almost boiling, *but do not let it boil.* Then put on one side, and let it simmer very gently for three to four hours, skimming thoroughly at intervals. Strain through a hair sieve and keep for use.

If beef be used in the place of the veal at least *six* hours must be allowed for simmering. A little more meat will be required—say eight and a half pounds instead of seven and a half.

Instead of cutting up the knuckle of veal so small, you may leave it in pieces of about a pound, the ham being entire, and the meat may be eaten hot with a little of the broth. Allow four to five hours.

Another mode is to cut beef from its bones, and roll lightly in flour, seasoned with pepper and salt; fry until a light brown. Put into the pan with a pint of cold water to each pound of beef, and vegetables as before, and stew gently for about six hours.

Trimmings of poultry, the remains of rabbits, partridges, or other game, and in fact, any pieces of clean and sweet meat, or bone,—cooked or uncooked—are useful in the stock-pot.

White Stock.—Cut up small four pounds of knuckle of veal, and put it into your pan, (previously rubbed with butter), with any poultry bones and trimmings, half a dozen slices of lean ham, and a glass of water; simmer gently till the gravy flows. Then add a gallon of cold water, two sliced carrots, two or three small onions, a few white peppercorns, a small handful of salt, a bunch of savoury herbs, and a blade of mace. Simmer gently for fully five hours, skimming constantly. Strain through a very fine hair sieve, and it is ready for use. If this stock be not strong enough, more veal may be added, but this will be found good enough for use in the preparation of most white soups.

Stock, to clarify.—When, by accident, stock is not clear, put it into a stewpan, take off any scum as it rises, and let the rest boil. Take out half a pint of the stock, and add it gradually to the *whites* of three eggs, (previously whisked well in half a pint of cold water); then put the whisk into the stewpan, and keep the liquid well agitated while you pour in the whites of egg and stock you have mixed; let the whole nearly boil, and then take it from the fire. After a time, the whites will separate themselves, when the whole should be passed through a clean fine cloth, and the stock should be clear. If not, repeat the process.

Browning.—Put two ounces of sugar in a stewpan, and let it melt slowly, stir with a wooden spoon, and when black add half a pint of cold water, and let it dissolve. If corked closely, this will keep for a long time. Burnt onions are also used for the purposes of browning. As a rule, use this colouring matter very sparingly, as it is liable to flavour the soup.

Plain Beef Soup, called in French, *Pot au Feu*, is a standing dish on the continent, and may be made thus:—Take three pounds of good rump of beef, or any other lean part, put it into a fire-proof earthen pot, with three quarts of water, one large carrot, two or three turnips, two leeks, a head of celery, and one burnt onion, add pepper and salt, and let the soup boil slowly, skimming it from time to time, for at least five hours; when the soup is ready, strain it through a fine hair sieve, then pour it over thin slices of bread, and serve it up. The meat and vegetables make a dish, which is served up after the soup.

Another receipt for "Pot au Feu."—Take one and a half pounds of beef, three to six ounces of broken bones, and an ounce of salt, and put them in your stewpan, with three quarts of cold water; let it boil up, and as soon as the scum rises, put in a dash of cold water, and remove the scum. It should then be quite clear. Add (peeled and sliced fine) a quarter of a pound each of turnips, carrots, onions, leeks, and parsnips; a little celery (cut fine), a clove or two, pepper and salt. Let it all boil up again, and then allow it to simmer very gently for about three hours. Take all the fat off the soup, remove the meat,—which serve separate, with a little of the soup over it—and serve hot.

Cottage Soup.—Cut a pound of salt beef into very small pieces, and let it simmer gently in a gallon of water for thirty or forty minutes; then put in some carrots, turnips, potatos, and a cabbage, all sliced. Let this boil slowly another hour, and then thicken with a pint of Scotch oatmeal, stirring to keep it smooth. Season it with pepper and salt, and serve very hot. Fore meat may be used, but with the above quantity, a very palatable soup is obtained.

Oxtail Soup.—Cut up two good tails into pieces about an inch and a half long, and soak for a couple of hours in cold water. Put them into a stewpan, with a bunch of sweet herbs, a little whole pepper, two onions, a carrot, and a turnip; add four quarts of cold water, and cover; when it boils, throw in an ounce of salt, and as the scum rises, skim it, and let it simmer for three hours; remove the fat, add a small quantity of vinegar, half a pint of Burgundy or port wine; before serving, the vegetables and herbs should be taken out.

Another mode is to take three tails, wash and soak them as before, but do not cut them up. Put them on a moderate fire in a gallon of cold water. When they boil, throw in a small handful of salt, and skim carefully till no more scum rises. Then add four moderate sized carrots, two or three onions, a large head of celery—all sliced thin—a large bunch of savoury herbs, two turnips, eight cloves, and half a teaspoonful of peppercorns. Stew gently for three hours and a half. If the tails be very large, lift them out, strain the liquor, and all the fat. Cut the meat from the tails, and put it into two quarts, or rather more, of the stock; stir in, and let the whole just boil up, when serve, flavoured with cayenne and salt. The herbs, cloves, and peppercorns must be removed, but the vegetables may remain if a thickening is added. Rice-flour or arrowroot is the best for this purpose. Thick soups should be of the consistency of good cream, and clear soups must be quite transparent.

Real Turtle Soup.—It is unwise to attempt to make turtle soup at home unless you have a first-rate professed cook. By far the best and cheapest way is to buy it ready made, by the quart, of a good cook or hotel-keeper.

Mock-Turtle Soup.—Parboil a calf's head, remove the skin, and cut it and the meat into small pieces; skin and slice the tongue, and put the whole into the stewpan with about three quarts of cold water, and a pint of Madeira, or a bottle of pale golden sherry. Simmer gently for two hours, season with cayenne, mace, salt, and a little lemon peel; mix two tablespoonfuls of flour in a little of the soup, and stir it into the stewpan, adding at the same time a little lemon juice, and the yolks of six hard eggs;

let the whole simmer for about a quarter of an hour, and serve very hot. A dozen forcemeat balls may be added just before the flour is put in. They should be made by mixing the brains with a little grated bread, finely minced suet, salt, pepper, nutmeg, and chopped parsley; make into balls with the yolks and whites of two eggs beaten, and fry to a good colour in boiling dripping.

Another receipt is to take half a calf's head, not skinned, and a pound of good pickled pork. Wash and soak both, and put them into your pan; add one onion, a head of celery (both cut in slices), sweet herbs, mace and pepper; cover with about one gallon of water, and boil gently till the meat is tender: then take out the head and the pork; separate the meat from the bones, return the latter into the soup, let them simmer gently for three hours, and then pour into a pan to cool; cut the meat into small square pieces, and prepare a few egg balls and forcemeat balls (made as in previous receipt); take the fat off the soup, and then return it to the stewpan, and, when quite hot, strain it through a fine hair sieve; then put in the calf's head and pork; add the forcemeat and egg balls, cayenne pepper, and the juice of half a lemon; let the whole simmer for a short time, and it will be fit for use. If you wish to brown the above, put a little of the fat into the frying-pan; dredge with flour; fry brown, stir, and return to the soup, and stir well in. If preferred, only a portion of the cut-up calf's head and pork need be served in the soup.

Several modifications of the above receipts could be given. Knuckle of veal, and a little lean ham is sometimes substituted for the pickle pork; adding a little cream just before serving, or—when served brown—a couple of glasses of golden sherry.

Mulligatawny Soup.—One of the best methods of making this soup is:—Cut into small pieces a knuckle of veal, and put into your pan with a little lean ham, and a bit of butter. Peel and cut into slices, four large apples, two onions, a small turnip, and a carrot; add a glass of cold water, and put over a sharp fire until the bottom of the pan is covered with jelly, moving the pan now and then. Add three spoonfuls of curry powder, one ounce of pounded almonds, and three heaped table-spoonfuls of flour; stir this in, and then put in a gallon of cold water with a teaspoonful of salt, and a dust of sugar. When it boils up, put it on one side of the fire, and simmer for nearly three hours, skimming constantly. Pass through a tammy into your tureen and serve. The pieces of veal may be sent to table separate, with plain boiled rice.

Another receipt.—Crack the bones of a knuckle of veal in two or three places; put into a pan, cover with water, and when half done, cut off the meat you wish for the soup, and boil the bones and the remainder of the meat to make the stock; let this stand until cold, remove the fat; cut the meat into small pieces, and fry in butter, with four onions sliced and floured, two or three dessert-spoonfuls of curry powder, add Cayenne and salt; put these into the stewpan; add the stock gravy, with three cloves, and a table-spoonful of lemon juice; let the whole simmer for an hour at least, and serve with plain boiled rice in a separate dish.

Or, in a quart of strong stock—made as previously directed—stew half a pound of butter with half a dozen large onions, a couple of dozen of carrots, and as many turnips, all these vegetables being peeled and cut into thin slices. When quite tender, strain off, and remove the vegetables; add to the stock in which they were stewed, about three quarts more of good plain stock, a handful of bread-crumbs, and two table-spoonfuls of curry powder; take a fowl cut into pieces, and fry with butter; when brown, put it into the pan with the stock; simmer for nearly three hours, the fat being taken off from time to time; just before ready, mix two table-spoonfuls of arrowroot in a little water, and put it into the pan, stirring well, until the soup becomes of

the consistency of good cream. Flavour with salt and Cayenne. Some persons serve the vegetables in the soup, but that is entirely a matter of taste.

Soup Julienne may be made thus :—Peel and slice very fine, (so that there are no pieces thicker than a straw, or longer than an inch), in any quantity, according to the number of persons, equal parts of leeks, carrots, parsnips, onions, turnips, celery, and potatos ; add an equal proportion of finely chopped lettuce, and a little sorrel and cerfeuil, or parsley, let these be about half cooked in a saucepan with sufficient fresh butter to prevent their burning ; when they are all of a good brown, add sufficient beef stock to make the quantity of soup required ; simmer gently for an hour, season with pepper and salt, and serve without straining. If there be no beef stock on hand, make some, as previously directed, for the purpose in a separate pan.

Another receipt.—Cut six pounds of beef into pieces of one pound each ; put in a pan with a bit of butter and a glass of water ; move the meat about until the glaze or jelly covers the bottom of the pan ; then add a gallon of cold water, two ounces of salt, three onions (with a clove in each), two turnips, two carrots, a head of celery, leek, and a bunch of parsley, thyme, and bay-leaf ; when boiling, put in two burnt onions (make these by baking in a slow oven until quite black, but not cinders) ; simmer for three hours, keeping it well skimmed, then pass the broth through a hair sieve into a stewpan ; you have previously cut two middling-sized carrots, two turnips, an onion, a leek, and a little celery into very thin strips, as before ; put them in another stewpan with two ounces of butter and a teaspoonful of powdered sugar ; place upon a sharp fire, tossing them over occasionally until well fried and looking transparent, then put them into the broth with the half of a young cos-lettuce, and a little tarragon and chervil ; when it boils skim off all the butter ; let it simmer until the vegetables are perfectly tender, when serve. The beef may be sent to table upon a separate dish.

Eel Soup.—Take half a dozen good-sized eels, and clean them well ; cut them into small pieces and put into your pan with a little butter and a couple of bruised or broken onions, (this is better that slicing them for this soup), and let them remain over a sharp fire for five minutes ; cover with boiling water, remove the scum, and add mace, pepper, salt, sweet herbs and parsley ; stew them very slowly a couple of hours, and strain them. Thicken the liquor with a little cream, or flour and butter, mixed gradually, and serve with sippets of toasted bread. The pieces of eel may either be served in the soup or separate.

Oyster Soup.—Put into a stewpan a quart of cold water, a quart of new milk, half a pound of fresh butter rolled in flour, pepper and salt. When this is just warm add the liquor—strained—of five dozen oysters, and let this boil for a few minutes, and then set it aside to cool. Then beard the oysters, add them to the liquor, and boil the whole sharply for two minutes, serve with a dust of nutmeg. *Mussels* may be substituted for oysters. Essence of anchovies and Harvey sauce improve the flavour of this soup.

Rabbit Soup. — Cut a good-sized rabbit into joints, and soak in cold water for an hour ; then dry and fry brown in butter, with three or four onions cut in slices ; when done, put into a stewpan, with three quarts of cold water, a pint of split peas, pepper and salt, and stew very gently for five hours ; then strain and serve hot. The rabbit is best served separate with a little pickled pork.

Hare Soup. — Melt six or eight ounces of fresh butter in a stewpan, and add twelve ounces of flour, and half a pound of fat bacon, cut small ; stir till of a light brown. Then, having cleaned and soaked your hare, cut it up into small pieces, put them in the pan, and stir till all is nicely set ; then fill up with one gallon of cold

water, a couple of sliced onions, a head of celery, cut small, a bunch of savoury herbs, and a few cloves; when it boils up put in a handful of salt, skim carefully, and simmer until the hare is tender—say from one to two hours, according to the age of the hare. Take out the hare and pass the remainder through a hair sieve; put it and the pieces of hare back into the pan with a gill of port wine; boil for ten minutes, and serve very hot.

This soup is improved if some of the more unsightly pieces of the hare are pounded in a mortar, before being restored to the soup for the last boil, and added to the soup in that form.

Grouse, Pheasant, Partridge, and all other Game Soups are made in the same manner as Hare Soup.

Giblet Soup. — Clean two sets of goose or duck giblets, and soak them for two hours in cold water. Cut them into equal sizes, except the gizzards, which should be smaller, and scald. Then put them into your stewpan with three pounds of shin of beef, half a pound of lean ham, three ounces of fresh butter, two each of carrots, turnips, and onions, peeled and sliced, a handful of salt, a large bunch of savoury herbs, pepper and salt. Put over a sharp fire until the glaze forms on the bottom of the pan; then stir in two table-spoonfuls of flour, and fill up with a gallon of cold water and a little good brown gravy (*see* receipt). Stir till boiling; skim, and simmer gently till the giblets are quite tender, when take them out and put them in the tureen. Strain the soup through a hair sieve, add a gill of cream and an ounce of fresh butter rolled in flour, give it one boil, and then pour over the giblets and serve.

A glass of port wine or mushroom catsup may be substituted for the cream. A few button onions, plain boiled, may also be dropped into the tureen.

Clear Vegetable Soup.—A carrot and a turnip, peeled and cut very small, and a couple of dozen button onions, peeled, must be washed and drained. Then put them in your stewpan with a little powdered sugar and about two ounces of butter, and let them be over a sharp fire for about ten minutes, or till they are covered with a thin coating of "glaze"—they must not brown; then pour over them three pints of clear broth (which *see*), and let simmer till quite tender, skimming all the time. This will take about half an hour.

Carrot Soup.—Any beef or poultry bones, or remains of veal may be put on with about one pound of fresh beef, in a little water with a sliced onion and six or eight large carrots. After several hours' stewing, strain the soup, put the carrots into it, and let it stand in a covered earthenware vessel till next day. Then take off the fat, and after making the soup and carrots hot, pulp them through a colander, and then through a fine hair sieve; add this pulp with a little salt, black pepper, cayenne, and any other spice you like, to the soup, give it a boil, and just before serving add half a pint of cream, or good milk, and if you wish it to be very rich, an ounce of butter rolled in flour.

Spring Soup.—Take a quart of young green peas and a quantity of lettuce, sorrel, chervil, parsley, chives, spinach, and young spring onions—all thoroughly cleaned and cut into small pieces. Put them into your stewpan with a pint of stock, a couple of ounces of fresh butter, pepper and salt. Stew gently, turning them over occasionally, until all are quite tender. Then pass them through a hair sieve, and add two or three quarts more stock, according as you like your soup thick or thin; throw in a little boiled rice or bread crumbs, simmer for twenty minutes, skimming and stirring, and serve.

Onion Soup.—Have ready in your pan a quarter of a pound of fresh butter; peel, and cut into small dice a dozen large onions, put over a sharp fire, and fry to a light brown, then add three table-spoonfuls of flour, mix well, and a quart of water, simmer till the onions are quite tender, season with salt and sugar, and serve. Some

cooks add a little grated cheese, but this is optional.

Cabbage Soup.—A fine large cabbage must be cleaned, and then cut up small, very small, and put into a quart of water, with two or three *minced* potatoes, a faggot of sweet herbs, a couple of sliced onions, and a couple of ounces of lard or fat bacon. Simmer gently for four hours, skimming as before. Serve very hot on slices of brown bread.

Parsnip Soup.—Put a quarter of a pound of fresh butter into your pan, put it over a gentle fire, and when melted, slice in two pounds of sweet parsnips, stew very softly till tender, moving them about from time to time; add enough broth to cover it, and simmer gently for half an hour; press through a hair sieve, and add two or three pints of good stock (*see* receipt), season with cayenne, white pepper and salt; boil up, skim, and serve very hot on fried sippets.

Vermicelli Soup.—Nothing is required but clear stock and vermicelli, in the proportion of half a pound of the latter to a gallon of the former. When the stock boils, add the vermicelli, simmer for ten to fifteen minutes and serve.

Macaroni Soup.—The macaroni must be boiled in water for ten minutes, strained and put into boiling stock, in the proportion of half a pound to the gallon; simmer slowly for half an hour, and serve very hot, with grated cheese on a separate dish.

Green Pea Soup.—Have ready in your pan a gallon to a gallon and a half of cold water, two sliced onions, and a little green mint; salt and pepper to taste; add one quart of old green peas, and simmer till they are quite tender; then press through a fine hair sieve, with a wooden spoon. Meanwhile stew in fresh butter a couple of young cos-lettuces, cut very small, and boil separately a quart of young green peas; when both peas and lettuces are tender, put the whole into the soup, and simmer gently until the young green peas are tender, then serve. *This soup is better if made with stock*, and many persons prefer to boil the sound pea-shells in the soup, but if so they must be taken out before rubbing through the sieve.

Winter (split) Pea Soup.—Soak a quart of split peas in soft water for twelve or fourteen hours, and remove those which float on the top. Then simmer in two quarts of water until tender; put them in your stewpan; add two quarts of beef stock, about a couple of pounds of shin of beef, any odd meat bones, chopped up, and a slice of fat ham; a head of celery, six onions, three each of carrots and turnips,—all peeled and sliced,—and seasoning to taste. Simmer the whole for two to three hours, stirring and skimming from time to time; pass all through a fine hair sieve, give it one boil, and serve with toasted bread. The liquor in which a joint of meat, such as salt-beef, salt-pork, leg of mutton, has been boiled, or even plain water will do for pea-soup, but stock is best and most nutritious.

Another Mode is to put a pint of split-peas into a gallon of water, with two ounces of butter, three pounds of shin of beef, one pound of crushed bones, and a knuckle of ham, or half a pound of good bacon; add two or three peeled and sliced carrots, as many turnips, a head of celery, four onions; salt and pepper; simmer gently for three hours; then crush the pulp from the peas through a sieve and return it to the soup; boil for another hour; then pass the soup through a fine sieve and serve. The meat may be made a separate dish. When green peas are in season, a pint may be added at the second boiling.

Cock-a-Leekie.—Use five quarts of good beef stock, made as directed. Wash well two or three bunches of fine winter leeks (if old scald for five minutes in boiling water), cut off the roots and part of the head, split into halves lengthways, and cut into lengths of about an inch. Put into the stock, with the leeks added, a fowl trussed as for boiling (an old cock is usually procured for this purpose, but a young boiling fowl is best, as it cooks more easily); simmer very gently for three or four hours, skim-

ming constantly; add pepper and salt to taste. When it is ready to serve cut up the fowl into neat joints, (their size must depend upon the number of diners), put them into your tureen, pour the soup, which should be very thick of leeks, over it, and serve very hot. Some cooks put a few French plums, whole, into the soup half an hour before serving.

Gravies.

The stocks already given for soups may be made the groundwork or basis of almost any but very rich gravies.

Gravies should have no fat: to prevent the disagreeable appearance of fat floating about on the surface of your gravy, pass it through a tammy, or napkin that has been dipped in cold water, the fat will adhere to this and the clear gravy will run through. If any grease remain after this process, touch each spot with filtering paper, which will readily remove it.

The number of standard receipts for gravies is enormous, but those following are good, simple, easy to make, and economical.

Brown Gravy.—Put into a three-quart stewpan (previously rubbed with butter) six onions, peeled and sliced; cut into thin slices three and a half pounds of shin of beef, and crush the bone; lay this on the onions, add a small turnip and two young carrots (sliced), a little whole pepper, and two or three cloves. This must remain over a moderate fire for eight or ten minutes, moving the contents now and then. After that put it at the corner of the fire, so that in about an hour to an hour and a quarter, the bottom of the pan is all over a thick high-coloured jelly-like substance. Then add three quarts of cold water flavoured with half a tablespoonful of salt, and let it all gradually come to the boil; it must be removed to the corner of the fire as before, and simmered gently for an hour—carefully skimming—and after that time your gravy—strained through a fine hair sieve—is ready for use. This gravy is suitable for all kinds of roast game, poultry, or meat, and will keep perfectly good for several days, by just giving it a boil up every now and then. It may be made as above with veal or mutton, but shin of beef is the best and cheapest.

Another Brown Gravy.—Prepare the stewpan with butter as before, and put into it three onions (previously sliced and fried to a light colour); prepare and put in your beef as directed in last receipt, add half a glass of cold water, a little whole pepper and two or three cloves; boil for ten or fifteen minutes, shaking the pan from time to time to prevent the contents burning. Then add three quarts of cold water as before, and when it boils up simmer gently for about an hour and a half; strain, and let it go cold, when carefully remove all the fat, and it is ready for use.

Thickening for Brown Gravy is made thus:—Put a quarter of a pound of fresh butter into a stewpan, and let it melt gradually; add about two-thirds that weight of flour, and keep it well stirred till it browns, but do not let it burn. When quite cold put it to the above gravy, (the quantities are here proportioned, so that if only one quart of gravy is made, use only about one ounce of butter for thickening), give it one boil, skim strain and serve.

Savoury Gravy.—Put into a quart stewpan two large slices of ham, and two pounds of shin of beef, sliced; a carrot, a large onion with four cloves stuck in it, a head of celery. a small bundle of parsley, lemon thyme, and savoury, a few leaves of sweet basil, a bay leaf, and a shallot, a piece of lemon peal, and twelve berries of allspice; pour over half pint of water, cover close, and simmer gently for half an hour; when it will be nearly dry; watch carefully, and see that it gets well browned all over; then add three pints of *boiling* water, and simmer two hours; strain; and when cold, clear away the fat.

Veal Gravy.—Slice a pound and a half of lean veal, and put it into your stewpan, with a few slices of undressed gammon of bacon, and two large onions sliced; set on a slow fire.

and shake occasionally until the meat is well browned; then fill the pan up with brown gravy, (made as directed), let it just boil up, and then simmer for about an hour to an hour and a half, skimming off all fat, strain, and use.

Venison Gravy.—Use the trimmings of the joint itself, and proceed as for brown gravy.

Liver Gravy.—Put the neck, liver, gizzard, and heart of a turkey or fowl into rather more than half a pint of cold water, with half a slice of toast, and a little lemon thyme, and savoury. When the liver is quite tender, take it out and pound it in a mortar; let the rest stew till reduced to about one half. Strain off, put in a spoonful of mushroom catsup, and the pounded liver; well mix, strain, add a bit of butter rolled in flour, and simmer for ten minutes. If too thick, add a little boiling water, and simmer a few minutes.

White Gravy.—This gravy is the stock of several white sauces, and is made thus:—Put into a quart stewpan three pounds of lean veal, cut into dice, and half a pound of lean ham, cut smaller; add a glass of cold water, and put over the fire until the "white glaze," or jelly, forms on the bottom of the pan; then add three pints of cold water, a bunch of savoury herbs, a sliced onion, and a blade of mace. Let it slowly come to the boil, then add a little salt, skim carefully, and simmer slowly for about three hours; strain, and when quite cold, remove all the fat.

Fish Gravy.—Skin, clean, cut up, and soak three small eels; put them in a stewpan and cover them with cold water; add two or three anchovies (or a little essence of anchovy); add some sweet herbs, whole pepper and mace, lemon peel, and a shred of horse-radish. Stew gently till the fish is drawn down, and put in, when about half done, a crust of bread toasted to a high colour. Strain off, thicken with a piece of butter and flour, and it is ready for use with almost any kind of fish.

Made Dishes, Entrees, &c.

Lobster Salad.—Boil two fresh eggs hard, take the yolks, and mix them in a tablespoonful of good cream; add two tablespoonfuls of salad oil. Now mix separately a teaspoonful each of fine salt, and made mustard, and a gill of malt vinegar. Add this mixture gradually to the eggs cream and oil, and let them be thoroughly incorporated. Then break up a large lobster, mix the soft parts with the dressing and put it at the bottom of the dish; then cut up the meat of the claws and tail into small pieces, mix with chopped endive and lettuce, put it on the dressing, and serve.

Another Way of Making Lobster Salad.—Cut up some lettuces and endive, and put them into your salad-bowl, with any small salad in season; and make a dressing thus:—Mix together, perfectly smooth and creamy, one tablespoonful of made mustard, two tablespoonfuls of vinegar, and four tablespoonfuls of salad oil, the yolks of two hard boiled eggs, a few drops of essence of anchovy, Cayenne, and salt to taste. Mix this dressing with the soft parts and the pickings of the lobster, and pour over the lettuce, &c. Then take the solid meat of the fish, and cut it into moderate pieces, and put it into the salad. Garnish with sliced eggs (hard boiled) and a few slices of cucumber.

Crabs and Crayfish may be made into salads in the same way.

Prussian Cutlet. — Take about a pound of veal, with a little fat; chop it fine; add half a teaspoonful of chopped eschalot, a teaspoonful of salt, half a one of pepper and a little nutmeg; mix thoroughly; make it into two pieces; roll them in egg and bread crumbs, and *sauté* in butter till nicely browned; serve very hot. Any other meat can be used equally as well as veal.

Stewed Rump Steaks.—Steaks for stewing should be cut rather thicker than for broiling. Melt a little butter in a stewpan, and brown the steak in it on both sides, shaking it now and then that it does not burn; then add

a little flour, and when it is coloured, cover the meat gradually with cold water. When it boils add a teaspoonful of salt, take off the scum as it rises, put in a few sliced onions, carrots and turnips; and a bunch of savoury herbs; simmer the whole gently for about three hours. If liked thick—which is best—stir into the gravy ten minutes before serving a tablespoonful of rice-flour or arrowroot, flavoured with a dust of cayenne and a little catsup.

Gibelotte of Rabbits.—Mince half a pound of streaked bacon into joints and fry; put it into your stewpan with two young rabbits, well washed and cut into joints, add a little flour; cover with cold water, salt and pepper to taste; let it slowly come to the boil, when add a couple of dozen of button onions, and a few button mushrooms; simmer gently until the pieces of rabbit are quite tender, when take them out. Let the sauce boil, keeping it stirred, till the onions are very tender, add a little browning, pour over the rabbits—which have been kept hot in the oven or before the fire—and serve.

Beef Olives.—Let your steaks be about six inches long, four or five broad, and not less than half an inch thick; beat with a rolling pin, and rub them over with yolk of egg; strew bread crumbs, chopped lemon-peel, minced parsley, chopped suet or marrow, grated nutmeg, and pepper and salt over them. Roll them up tightly, and skewer; fry lightly, or brown them in a Dutch oven; then stew until quite tender in some good stock (which *see*); thicken with flour, and add a little mushroom catsup, and lemon juice. If wanted richer, serve with pickled mushrooms, yolks of eggs (hard boiled), and fried force-meat balls.

Stewed Chops or Cutlets.—Place six mutton chops or cutlets into a pan with a pint of cold water, and a little sugar and salt; simmer very gently from an hour and a half to two hours, skim, put in a handful of pearl barley, sliced celery, leak, and turnip; and serve the chops in the broth, unstrained.

Broiled Fowl.—Truss a fowl as for boiling, remove the back-bone, and press quite flat, season well with pepper, salt, and, if liked, with eschalots, put into your frying-pan; fry upon both sides, take out, egg over, dip into bread crumbs, place on a gridiron, and broil a very light brown colour. Serve with plain gravy and mushroom sauce.

Oyster Sausages.—Pound to a paste in a mortar—removing all skin, strips, &c.—half a pound of lean neck of mutton, and half a pound of good suet, season with pepper and salt, chop two dozen large oysters very fine, moisten the paste with a gill of cream, and add the chopped oysters; form into fancy rolls, and fry to a light brown.

Fried Patties.—Take half a pound of cold veal, and one pound of ham (or any less quantity in these proportions), and mince fine; add an egg, boiled hard and chopped, and a seasoning of pounded mace, salt, pepper, and lemon-peel; moisten with a little gravy and cream. Make a good puff-paste (*see* receipt); roll rather thin, and cut it into round or square pieces; put the mince between two of them, pinch the edges to keep in the gravy, and fry to a light brown. Fry the patties about fifteen minutes.

Patties, made as above, may also be baked in patty-pans, in which case brush over with white of egg. *Oysters* may take the place of the ham, as above, and *chicken* by itself makes excellent patties.

Fricassee of Chicken or Fowl.—Carve the bird into eight pieces, *i.e.* the two legs, the two wings, and the remainder cut into four—wash, put into a stewpan and cover with water, season with salt, pepper, a bunch of parsley, four cloves, and a blade of mace, let simmer for twenty minutes, pass the stock through a sieve, take out the pieces of fowl, trim, then in another stewpan put two ounces of butter, a spoonful of flour, just moisten with the stock, put in the pieces of fowl; stir occasionally, until boiling, skim, add twenty button onions, let simmer until onions are tender, when add a gill of cream, mixed with the yolks of

two eggs, stir in quickly over the fire, but do not let boil, take out the pieces, and serve with the sauce and onions over them.

Rump-Steak Pie.—Take two and a half pounds of good rump-steak, and beat it well with a rolling-pin; cut it into thin slices, and lay it in a dish bordered with paste. Season with salt and pepper, and cover the meat with water. Lay on the cover (made as per receipt, *see* "Paste"), join to the paste round the rim, trim off close, make a hole in the top; bake in a well-heated oven for nearly an hour and a half. You may season with minced onion or eschalot.

Another Way.—Stew or broil the steak partially before putting it into the pie, and then the meat need not be cut thin. A sheep's kidney or two, or a dozen oysters (bearded) improve this dish.

Beef Collops.—Cut into pieces two or three inches long, two pounds of any part of beef that is tender; beat flat with a rolling-pin, and dredge well with flour; fry in butter to a light brown; lay them in a stewpan, and cover with brown gravy (*see* receipt); put in half an eschalot, minced, a lump of butter rolled in flour, pepper and salt; simmer gently till tender; serve with pickles, or squeeze in half a lemon, according to taste; serve in a tureen, very hot.

Minced Collops.—Mince four pounds of fresh round of beef *very* fine, and add to it four large onions, chopped small; pepper and salt. Put into a stewpan with a little water; dredge in enough flour to just cover the meat; then take a collop mincer (which is a piece of wood about twelve inches deep, and four across, with the end sharpened), and beat for a few minutes; then cover and slowly stew for half an hour. Toast some bread, cut in diamonds; put the collops on a large dish, and dress with the toast. A few poached eggs should be laid on top; mushroom catsup may be added.

Peas and Butter.—Put a quart of young green peas into a stewpan with half a pound of fresh butter; add the heart of a large lettuce, a bunch of parsley, a few small onions, and salt; stew together slowly till done; thicken before serving with a little butter and flour, and the yolks of two eggs; add a little white sugar in powder, and serve.

Anchovy Toast.—Wash, bone, and skin six or eight anchovies and pound them in a mortar with an ounce of fresh butter, and a few grains of cayenne and nutmeg; when this is an even smooth paste, rub it through a very fine hair sieve, and spread on toasted bread or rusks. If preferred, the bread may be fried in butter instead of toasted.

The above "anchovy paste," or "anchovy butter," may be made in a quantity, and kept good for a long time, by putting it in little pots, and, when cold, covering with a piece of tissue paper, and pouring over it a little clarified butter. Tie over with a bladder or oiled paper, to make it air-tight.

Poached Eggs and Bacon. — The bacon should be streaked, well-trimmed, without rind, and thin; lay the slices in your pan, put it on the fire, turn the bacon pretty frequently, and when done, put on a dish before the fire. Poach the eggs, and serve on the bacon without breaking the yolks.

Fried Eggs and Bacon. — Proceed with the bacon as above; fry each egg separately in a little bacon fat; the eggs should be broken in a cup, and the yolks preserved whole, turn them carefully into the pan and they will soon cook; the yolks must not harden. As each egg is done, lay it on the bacon in front of the fire. Serve very hot.

Broiled Beef Bones.—Procure some sweet rib or sirloin bones with a little meat all over them; season well with salt, cayenne and black pepper; broil to a good brown, and serve on a napkin, very hot.

Bullock's Kidney.—Cut the kidney into thin slices, and lay them in cold water for an hour or two, changing the water twice. Dry, sprinkle with minced parsley and savoury herbs, and fry to a nice brown; when done, sprinkle in a little flour, and add a gill of sherry and the same quantity of

good brown gravy (*see* receipt); let it just simmer for a minute (*not boil*); serve very hot, garnished with sliced lemon.

A-la-mode Beef.—Take six pounds of the thick flank of beef, and beat it well; lard it with bacon (*see* Larding), and put into a stewpan with some rind of bacon (well soaked), two onions, two carrots, some savoury herbs, four cloves, pepper and salt; add a glass of water, and let it stew over a very slow fire, closely covered, for five to eight hours, (shaking it from time to time to prevent burning), or until quite tender. A glass of French white wine and a small quantity of brown gravy may be added to the liquor it was stewed in, which, before serving, must be strained. Vinegar (a teacupful), allspice (a dozen berries), parsley, celery, and a few carrots and turnips may be added where liked. This should, where possible, be cooked over a hot-plate, and not on an open fire, as it is essential that the stewing is very slow.

Stewed Ox Palates.—Let four palates remain in a basin with warm water for half an hour; then wash them; simmer in a stewpan with water, until they can be easily skinned. Then take them out, skim them, and cut into square pieces; put them into a stewpan, with one pint of brown gravy (*see* receipt), a spoonful of white wine, as much catsup and browning, an onion stuck with cloves, and a slice of lemon. Stew for half an hour, (or until tender), take out the onion and lemon, thicken the sauce, (as previously directed), serve with forcemeat balls, and garnish with sliced lemon. There are many ways of serving ox-palates, but this is the best and simplest.

Broiled Rump-Steak.—Rump-steaks should be cut from a rump that has hung some days, and be about three-quarters of an inch thick; if at all fresh, beat them with a rolling pin. The fire must be clear, (sprinkle a little salt on it just before you are going to cook), and the gridiron clean, hot, and placed in a slanting position, to prevent the fat from making a smoke. Season the steaks with pepper and salt; and when brown on one side, turn them. When half done, take up, and lay them in a hot dish before the fire, with a slice of butter, and a little pepper and salt, between every two steaks. While they are in this state, shred a shallot very fine, and put to it some good gravy, with a little catsup. Having drained the steaks of the gravy, replace them on the gridiron, and keep turning till done. Put them on a dish, with the gravy and shallot; garnish with horse-radish, and serve very hot. The shallot and catsup may be omitted if not liked. In turning steaks, you should use a pair of tongs, and not a fork.

Fried Rump-Steak.—Fry them brown in fresh butter, and serve very hot with walnut catsup. Oyster, mushroom, tomato, or onion sauce (*see* Sauces) usually accompany rump-steaks.

Rump Steak and Fried Potatoes.—Have rather thin steaks—say half an inch—broil them well, turning them frequently, and serve with sliced potatoes round the dish—fried brown and crisp in boiling butter. Sometimes the butter the potatoes were fried in, flavoured with a pinch of powdered herbs, is poured *under* the steak.

Rump Steak and Kidney Pudding.—Cut two pounds of tender rump steak into pieces about an inch or two square, add two or three sheep's kidneys, sliced; line your pudding basin with a good thick suet crust (*see* receipt), leaving it lapping a little over the edge of the basin; then put in the steak and kidney in layers—a couple of dozen oysters, blanched and bearded; makes an excellent addition: season each layer with salt and black pepper. When full put in half a pint of water, and cover the top with more crust, moisten the edges and join the two crusts firmly, then turn up the crust which was lapping, and join firmly. Dip your pudding cloth in hot water, wring it out, flour it well, and tie up pudding, basin and all; put it into a large saucepan or copper of boiling water—adding hot water from time to time so that the pudding is always

covered; let it boil continually for at least four hours. *It must not stop boiling for a minute.* When done take off the cloth, cut a little hole in the top of the pudding, and serve *in the basin*, on a dish, very hot. Bullock's kidney will do if sheep's cannot be procured. A few mushrooms add to the flavour.

Kidney Pudding.—Slice the kidneys thin, and proceed as directed for rump steak pudding. A few mushrooms or oysters greatly enrich this dish. If veal kidneys are used a few slices of ham must be added.

Mutton, Lamb, Veal and Pork Puddings are made on the same principle:—For mutton use loin chops; for lamb, the neck; veal, the leg (the veal is better if fried a little first with a few slices of bacon—and then put in the pudding with the bacon and butter it was fried in); pork, the leg (season highly with pepper, salt, and dried sage, and add a little pork sausage meat). These puddings will take from one and a half to two and a half hours *boiling continually.* Serve in the basin.

Boiled Tongue.—Soak in cold water for three hours, if just out of the pickle; but, if dried, soak for ten or twelve hours. Put in a stewpan of cold water, with a faggot of savoury herbs; when it boils up, skim, and simmer gently until quite tender; peel and serve very hot, garnished with parsley. This is a proper accompaniment to poultry.

Toad-in-the-Hole.—Make a batter of four eggs, about one to one and a quarter pints of good milk, and four heaped tablespoonfuls of flour; salt to taste—the flour should be first mixed smooth with a little of the milk and then the beaten eggs and the other things put to it; stir well. Cut into about six pieces each, two sheep's kidneys, and put them in a pie-dish with two pounds of rather fat rump steak, cut into twelve or fourteen pieces. Pour the batter over, and bake for nearly two hours in a hot oven.

Boiled Calf's Feet.—Take two white calf's feet, and soak them in warm water for an hour and a half; bone to the first joint, and stew in enough water to cover it for about three hours, with a little fat bacon—sliced, a bunch of savoury herbs, a sliced onion, two or three cloves, a blade of mace, whole pepper, a wine-glassful of lemon juice and salt to taste. Serve smothered in parsley and butter (*see* receipt). The liquor, strained, may be mixed with some veal gravy and served in a tureen.

Calf's Liver and Bacon.—Cut the liver into slices about a quarter of an inch in thickness; take as many slices of bacon as there are of liver, fry the bacon, and put it in a dish before the fire; then fry the liver in the bacon fat, to a good brown; when done, take them out and put into the pan some chopped parsley, chibols, and shallots, and fry brown; add a little flour, and a gill of French white wine, with a dash of vinegar; let all these boil together for a minute or two; pour over the liver and serve.

Curried Chicken.—Cut up into joints and take off the skin, roll each piece in flour, mixed with a tablespoonful of curry powder. Slice two or three onions, and fry them in butter of a light brown. Then add the meat, and fry all together, till it begins to brown, put the whole into a stewpan, and just cover with boiling water. Simmer gently two or three hours, and serve with boiled rice.

Rabbits, Young Turkeys, and Veal may be curried in similar style.

Cod-Fish Pie.—Put two or three good slices of cod into salt and cold water, and let it remain for three or four hours. Put the fish into a pie-dish, season with nutmeg, mace, pepper, and salt; add a bit of butter and half a pint, or a little more of good stock; cover with a good crust, and bake in brisk oven for about one and a quarter to one and a half hours. When done put in a sauce (make a little hole in the top and pour in through a funnel) made thus:—Mix together a gill of cream, a gill of stock, a lump of butter rolled in flour, a bit of lemon peel—minced, and a dozen oysters; put this in a stewpan, let it just boil up, and add to the pie.

Veal Collops.—Take a couple of pounds of veal, and cut it into thin pieces about three inches long; dredge them with flour; fry in butter for a few minutes. Put them into your stewpan in a pint of good gravy (*see* receipt), with a bit of butter rolled in flour, a pickled walnut, a few capers, salt and pepper; simmer the whole for about ten minutes, and serve.

Pork Cutlets.—Bone and trim half a dozen lean pork chops, and broil them for about fifteen or twenty minutes, until well done, over a brisk clear fire. Serve with tomato sauce, or pickled gherkins.

Veal Cutlets.—Cut into good thick cutlets—say nearly an inch—two or three pounds of loin, neck, or leg of veal. Roll them in bread crumbs, mixed with a few powdered savoury herbs, pepper and salt; and fry them in butter, to a light brown; when throughly done, put them in a dish in front of the fire, and make the following sauce:—Put into the pan a little flour and butter, add a teacupful of boiling water, salt, pepper, and a squeeze of lemon; boil up, pour over, and serve.

Mutton Cutlets.—Cut from the neck, loin, or leg, about half a dozen good slices; broil them till nicely brown, and serve with mashed potatos in the same dish, or with sauce piquante.

Ragout of Duck.—Prepare a duck as for roasting; roast until well browned. Meanwhile, put into a stewpan two or three large onions (sliced and fried), a few leaves of sage and lemon-thyme, pepper and salt. Put in the duck; cover the whole with good gravy (*see* receipt), and simmer till the duck is quite tender (say twenty to twenty-five minutes); skim and strain the gravy, add a little thickening of butter and flour, let it boil up, pour it over the duck, and serve. Green peas, boiled plain, and put into the gravy, after straining, and allowed to just boil up, may be served with this.

Veal and Ham Pie.—Cut up into thin slices a neck of veal, and take away the bones; cut into small pieces a few slices of cooked ham; put it in a pie dish, in alternate layers, and season highly. Add a little water, cover with a good paste crust, bake well in a sharp oven, and when done pour in a little good veal gravy, highly seasoned. Sliced sweetbreads, bearded oysters, forcemeat balls, a sliced veal kidney, sliced eggs, hard-boiled, or a little lean pork—cut into squares—may be added with great advantage.

Rabbit Pie.—Cut a young rabbit into moderate sized joints, remove the principal bones, and split the head; lay all in warm water for about thirty minutes; then dry them, season with white pepper, salt, pounded mace and nutmeg to taste (parsley and bay leaves may be added when liked); put in the joints of rabbit with a little ham or fat bacon, cut into squares, a few forcemeat balls, and a couple of hard-boiled eggs, sliced lengthways Add about a tumbler of cold water; line the dish, and cover with a good crust; bake in a hot oven for about an hour and a quarter to an hour and a half; when cut add—very hot—a little richly-seasoned gravy, which can be made by stewing the bones of the rabbit in stock, with an onion, a bunch of savoury herbs, and a little allspice; strain before putting it in. The liver can either be mixed in the forcemeat or cut up and put in the pie.

Giblet Pie.—Scald and clean two sets of goose or duck giblets, cut into pieces, and wash them; put them into your stewpan with two or three small onions, a bunch of savoury herbs, salt and whole pepper; simmer gently in a little water for an hour; then put them into a pie dish with seasoning, and the liquor in which they have been stewed (strained); when cold, line the edges of the dish, and cover it with puff paste; before serving, open the crust, and pour in a little rich white gravy, mixed with a glass of French white wine, seasoned, and made quite hot: it will require an hour to an hour and a half to bake. A good rump-steak cut in three or four pieces, and put in the bottom of the pie-dish is an improvement.

Stewed Giblets.—Clean, and parboil them; take off the outer skin of the

feet; cut them up in small pieces and stew gently till quite tender, in good stock (*see* receipt), with some sweet herbs, an onion, cloves, whole pepper, and a little catsup; when done, strain the sauce, and thicken it with a little flour and butter; then pour it hot over the giblets. Just before serving add a squeeze of lemon.

Jugged Hare.—Clean and cut up your hare into small joints; put them in lukewarm water and a little vinegar, and let them remain for half an hour. Dry and dredge the pieces with flour; fry in boiling butter. Then put into a large earthenware jar or jug about a pint of good beef gravy (*see* receipt), a large onion or two (stuck with a few cloves), a sliced lemon (peeled), a high seasoning of cayenne, salt and whole pepper, and the pieces of fried hare. Cover the jar closely, and set it in a saucepan of boiling water up to the neck. Let it boil continuously until the hare is quite tender (say three and a half to four hours). When nearly done, put in three or four glasses of port wine, and a few forcemeat balls (*see* receipt), which have been previously fried. Arrange the pieces on your dish, and strain gravy through a cloth previously wrung out in cold water (this removes the grease); give it another boil up, pour over the hare, and serve—with red currant jelly.

Jugged Hare (*another Way*).—Soak and cut up the hare as before; then drain and put into a stewpan with a pint and a half of good stock (*see* receipt), pepper, salt, two or three cloves, a shallot, and two or three green onions shred fine, a bunch of savoury herbs, and two or three bay leaves; stew for about an hour on a slow fire; then put it into a deep dish that will stand heat; strain the liquor from the stewpan on it, adding a little more stock, cayenne, a squeeze of lemon, and a pint of port wine. Let it bake in a slow oven until tender—say two hours—covering the dish with a coarse paste of flour and water; when done, remove the paste, put into a hot dish, strain the gravy as before, thicken it a little with butter and flour, give it one boil; pour it over the pieces of hare, and serve very hot, with red currant jelly.

Hare Pie.—Soak, wash and cut up the hare as for jugging; season highly with a few cloves pounded, and some whole black and cayenne pepper; then lay the pieces in a pie dish, with a few small slices of ham, about a pint of good brown stock (*see* receipt), and a tumblerful of port wine; cover the dish with puff paste. If to be eaten hot, a suet crust is very good; but if to be eaten cold, raise the crust while hot and fill up the dish with rich, highly seasoned beef gravy, which when cold will become a firm jelly.

Partridge Pie.—Take about half a pound of veal cutlets and put in bottom of your pie dish; on the veal lay a large thin slice of fat ham. Split a brace of partridges in halves (after being plucked, drawn and cleaned, and the legs cut off at the first joint); season with whole pepper, salt, and a little chopped parsley; add a few mushrooms, and put a bit of butter in each half bird. Put the partridges on to the ham and cover with half to three quarters of a pint of good stock; put a border of paste round the dish; cover with puff paste, brush over with yolk of egg, and bake in a brisk oven for nearly an hour. If to be eaten cold, lift the crust while hot, and fill up the pie with good, highly-seasoned beef gravy.

Pigeon Compote.—Truss as for boiling six pigeons; grate the crumb of a stale penny loaf; scrape a pound of fat bacon; chop some thyme, parsley, and onion, and some lemon-peel fine; grate nutmeg, and season with pepper and salt. Mix with two eggs. Put this forcemeat into the craws of the pigeons, lard the breasts; fry brown; stew in beef stock three quarters of an hour; thicken with butter and flour, serve with forcemeat balls round the dish, and strain the gravy over.

Grouse Pie.—Pick and clean your grouse, and if large cut them into joints, but if small, put them in whole; season with cayenne, salt, whole pepper, and two or three

bruised cloves; put a bit of butter into each bird, and lay them closely into a pie dish, with a glass of good beef stock, and another of port wine; cover the dish with puff paste, and bake it an hour to an hour and a quarter. If intended to be eaten cold, have ready a little rich gravy, and pour into the dish while hot.

Pigeon Pie.—Pick and clean a couple of birds, and rub them inside and out with pepper and salt, and put a bit of butter inside each. Cut about a pound of rump-steak into several pieces and lay them in a pie dish; put on them the pigeons, a few slices of fat ham, and the yolks of two or three hard-boiled eggs. Three parts fill the dish with good stock (*see* receipt); season with pepper and salt; put a border of paste round the edge, and put on your puff-paste crust. Glaze the crust with yolk of egg and bake in a hot oven for about an hour or a little longer. Two of the feet should be cut off and put through the top.

Salt Duck.—Rub a quarter of a pound of salt well into a duck; turn the duck daily on a dish for three days. Then wash clean, put it into a stewpan, with a half pint of water to the pound; let it simmer for two hours. Serve with white onion sauce.

Sweetbread Pie.—Cut your sweetbreads into thick slices, and stew for about a quarter of an hour in white stock (*see* receipt), with a few herbs, chopped shallot, and mushrooms, salt, pepper, and a piece of butter; then strain the gravy, put into a pie dish with the sweetbreads some ox palates, (previously boiled very tender), or the remains of a roasted fowl, and a little ham, some green peas, or asparagus tops, the yolks of some hard-boiled eggs, and forcemeat balls; over the whole put thin slices of fat bacon. Cover with a puff-paste crust, and bake for about an hour and a half to two hours in a moderate oven. If when cut it looks dry add a little good veal gravy, hot.

Roast Sweetbreads.—Scald in milk and water, and when half done, take out and wipe dry; rub over with yolk of egg, and roll in fine bread crumbs. Roast to a good brown in a Dutch and serve with fried bread crumbs.

Stewed Sweetbreads.—Stuff with good forcemeat three large sweetbreads (previously soaked in warm water for an hour), skewer them up; then put a few slices of bacon at the bottom of a stewpan, season with pepper, salt, mace, cloves, sweet herbs, and a large onion sliced. Lay upon these slices of veal cut thin, and the sweetbreads over them. Cover all up close for ten minutes; then pour in a quart of boiling water, and simmer gently two hours. Take out the sweetbreads, strain off the gravy, skim, and boil it till reduced to half a pint. Return the sweetbreads to the pan, and boil two or three minutes; dish, with the gravy over. Garnish with lemon, and serve very hot.

Baked Sweetbreads.—Soak them for an hour in warm water; put into boiling water and simmer for ten minutes; drain them; brush over with yolk of egg and roll in fine bread crumbs; bake for forty minutes in a moderate oven. Serve on toast, with brown gravy in a tureen.

Lamb's Sweetbreads may be dressed in the same way.

Haricot Mutton.—Cut a loin of mutton into chops; or, if breast, into square pieces—fry them brown in clarified dripping; put them into a stewpan with a few onions (sliced and fried in butter), carrots and turnips cut in thin slices, two or three cloves, pepper, and allspice; this should be put to simmer very slowly for about an hour and a half to two hours and a half in a little water; serve with mushroom catsup. A bunch of savoury herbs may be stewed in this, and taken out before serving.

Braised Fillet of Mutton.—Take the fillet of a tender leg of mutton, cover it with buttered paper, and roast for two hours. Boil some French beans, which drain; take the paper off the meat, and glaze it; let the beans heat in a pint of good gravy; put them in the dish, and serve the meat on them.

Tripe.—Have it dressed nicely, and then boil it in milk and water until quite tender—say one hour, for dressed

tripe; if undressed more than twice that time. Dish very hot, smother in onion sauce (*see* receipt) and serve. You may also dress it in any of the following ways—always first boiling it till tender, and removing some of the coarser fat.—Cut into squares, dip in butter, roll in bread crumbs, and fry to a light brown. Or, stew in beef gravy with mushrooms. Or, cut into collops, sprinkle with chopped onions and minced herbs, and fry in butter. Or, stew in gravy with a little curry-powder, flour, and cream.

Scotch Haggis.—Thoroughly clean a sheep's pluck; make various cuts in the heart and liver to let the blood out; put into a saucepan, with the wind-pipe hanging over the side; change the water after ten minutes; let it boil twenty minutes more; then take all out but half the liver, which must boil until it will grate easily. Now take the other half of the liver, the lights and the heart, and trim away all the skin and black portions; then mince finely. Mince a pound of sweet beef suet, discarding the stringy parts; cut half a dozen onions up small; grate the half liver that was left in the pot; and then mix together the minced heart, &c., the suet, onions, and grated liver. Scald and peal a dozen little onions and add them to this. Then take some finely ground oatmeal which has been slowly toasting in front of the fire or in the oven for an hour or two, and is slightly brown; put the mince on a board, season highly with pepper, salt, and Cayenne; sprinkle the meal over this, and bind it all with half a pint of good beef stock, a little milk, and the yolks of two eggs. *Thoroughly* clean a good strong sheep's paunch, and put in the whole of the mixture, adding a table-spoonful of lemon juice,—being careful to allow room for the meat to swell,—and press out the air. Sew up firmly, and enclose the paunch, in a short canvas bag which also sew up tightly. Put on in cold water and let it gradually come to the boil: as the bag swells up first prick it in two or three places with a large needle. Simmer slowly for about three hours; turn it out, and serve very hot. For the lights, sheep's kidneys or tongues may be substituted.

Dried Haddocks.—The best way to cook these fish is to put them in a large basin with some savoury herbs and a bay leaf, and cover them with boiling water; put something over the top of the basin to keep the steam in; keep the fish in the water for ten minutes to a quarter of an hour, when take them out, drain, rub over with a little butter, pepper well, and serve very hot. If the haddocks are large, cut them into four pieces.

Lobster Cutlets.—Take two lobsters or one large one; take all the meat out of the shell, and pound it to a smooth paste, in a mortar with a bit of butter, and grated nutmeg, pounded mace, Cayenne, salt, and pepper to taste. Divide the paste into equal pieces, and make them into thin shapes like cutlets, cover with egg and bread-crumbs, and fry in boiling lard to a good colour; drain and serve hot.

Lobsters, Crabs, and Crayfish when served plain should be dressed thus:—Cut the body from the tail and cut both in halves lengthways, break off the two large claws and crack them in two or three places without breaking the meat, arrange the pieces as nearly as possible as if the fish were entire, and serve with a garnish of sprigs of parsley.

Fricassced Soles.—Take two medium sized soles and fry plain in butter, as directed, with a small sole. When done take the meat from the small one, mince it; and mix with a little chopped lemon peel, chopped parsley, grated bread, nutmeg, salt, and pepper; bind it with the yolk of an egg and a little butter, shape this into balls, as for forcemeat, and fry in butter. Thicken the gravy with a little flour, put in a glass of port wine, a little lemon juice and Cayenne; put the two soles into the stewpan, give them one boil up, and serve very hot, on a hot dish garnished with sliced lemon.

Eel Pie.—Prepare the eels as for stewing; put in your pie-dish a little forcemeat; add the eels—except the heads and tails, season with nutmeg,

pepper, salt, and a little chopped parsley; put in a glass of veal gravy (*see* receipt), cover it with puff-paste, rubbed over with yolk of egg, ornament the pie with some of the paste; bake it about an hour, and when done, pour in a sauce made as follows:—The trimmings boiled in half a pint of veal gravy, seasoned with pepper and salt, a tablespoonful of lemon juice, and thickened with flour and butter; strain it through a fine sieve, and when boiling put into the pie.

Boiled Eggs.—Put them into boiling water, and boil for three minutes if liked lightly boiled; but usually three and three-quarters to four minutes, when the white will be well set. If wanted hard—say six minutes; if for salads, ten minutes. Care must be taken to put the eggs very gently into the water, the best plan being to put them in with a spoon, and lay them on the bottom of the saucepan. For new-laid or extra-large eggs, a little longer time is required.

Poached Eggs.—Boil some water in a stewpan, or deep frying-pan; break each egg separately into a cup, and when the water boils, take off the pan, and gently slip the egg into it without breaking the yolk; let it stay till the white is set, then put it over a moderate fire, and as soon as the water boils again, the egg is done (say two and a half to three and a half minutes). Take it up with a slice, round off the edges of the white, send up the egg on a toast, or on ham or bacon well fried, or slices of broiled beef or mutton. The bread should be somewhat larger than the egg, about a quarter of an inch in thickness, and barely toasted of a yellow brown. The best eggs for poaching are such as have been laid two days, for new ones are too milky, and old ones too strong. A poached egg, to look well, should exhibit the yolk (which must never be hard) through the white. Never poach more than three eggs together; serve two to each person.

Fried Eggs.—Cover the bottom of the pan with fresh butter, and when melted break in the eggs as for poaching; when the whites are set, take the eggs up with a slice, and serve upon fried or toasted bread, or upon fried ham or bacon.

Poached Eggs and Ham Sauce.—The eggs are to be poached as before directed. Mince fine—with a gherkin, an onion, some parsley, pepper, and salt—three slices of boiled ham; simmer for about fifteen minutes in enough gravy to cover it. When this sauce boils dish the eggs, squeeze over a little lemon juice, and serve with the sauce over them.

Scotch Eggs.—Boil your eggs hard, remove the shells, and cover them thickly with a forcemeat made as follows:—Take some veal or sheep's kidney, with a slice of ham, a cleaned anchovy, a bit of butter, shallot, cayenne, and a green onion, all finely minced together, and mixed to a proper consistency with the yolks of eggs. Dredge with flour, and fry the eggs in boiling lard, or clarified dripping; serve up with rich gravy.

Curried Eggs.—Mix into a paste with a little gravy a small tablespoonful of curry powder; then add about a pint or a pint and a half more gravy; mix it all smooth, and let it simmer slowly for about four hours, when it should be reduced to about half a pint. Boil half a dozen eggs hard, slice them lengthways, put them into the gravy (previously thickened with a little butter and flour) and when very hot serve.

Eggs are cooked in a variety of other ways—stuffed, stewed in gravy, cooked on a hot-plate, and browned with a salamander, boiled hard and served with various vegetables, broken and put in front of the fire, in a dish with a little milk, covered with grated cheese, and browned with a salamander; beaten up in milk and flour, cooked slowly and browned, &c. &c.

Plain Omelette.—Break, separately, eight eggs, season with a teaspoonful of fine salt, and a dust of pepper, and beat them till exceedingly light, with a little milk or water: the more you beat them the lighter will be the omelette. Melt about a quarter of a pound of fresh butter in a frying-pan or omelette-pan. Beat the batter for another minute, and then pour into

the pan ; shake for a minute or two to prevent sticking, and when the under side is of a bright golden brown, fold it in two, so as to make it like a half moon ; in a few seconds the edges will unite—it is then done ; take up without breaking, pass a salamander or hot shovel over it, and serve very hot on a hot dish. From five to six minutes is the average time for cooking omelettes of this size. If the yolks and whites are first well beaten separately, and then mixed and beaten again, the omelette will be lighter.

Savoury Omelette.—Proceed as for plain omelette, only adding before beating it up a teaspoonful of minced parsley, another of spring onions, chopped very fine, and a few herbs, minced. Minced ham, oysters, &c.—previously cooked—may be added to the above by mixing them with the eggs or sprinkling them on the omelette just before doubling it over.

Veal Kidney Omelette.—Cut up some cold roast veal kidney into small dice, with a little bit of the fat, make it hot in gravy, with a seasoning of pepper, salt, and parsley. Do not let it boil. Have ready a plain omelette made as before directed, and just before doubling it over put the kidney into the middle ; fold over, and serve as before.

Cheese Omelette.—Mix a little grated Parmesan cheese and a gill of cream with your eggs, and proceed as for plain omelette.

Salmon Omelette .—This is the English form of the celebrated *Omelette au Thon*, of Brillat Savarin. Take the soft roes of two carp or mackerel ; cleanse them in cold water, and then let them lie in boiling water (with a little salt) for five minutes. Then chop up fine together these soft roes, a little piece of freshly boiled salmon, and a *minced* shallot. When these are thoroughly mixed put them into a pan with a little butter ; when the butter is *just melted* take it off the fire and mix well the whole with twelve fresh eggs—previously beaten — the yolks with a little salt, and the whites to a froth, and then again beaten together ; then cook your omelette as directed for "plain omelette," and serve, very hot, on a hot dish, with a garnishing of chopped parsley and green spring onions, flavoured with lemon juice. This is a marvellously delicious and succulent dish.

Cold Fish Omelette.—Put into a saucepan, with sufficient water to *moisten* them, any scraps of cold lobster, turbot, sole, or any other delicate white fish, and a few drops of some fish sauce; warm them through; have a good plain omelette ready for turning when the fish is nicely warm; put the fish in the middle, and fold over, as before directed. Serve instantly on a hot dish garnished with a few spring onions and parsley minced, with lemon juice in butter.

Sweet Omelette. — Proceed as for plain omelette, but use cream instead of milk or water, and powdered loaf sugar and grated lemon peel instead of pepper and salt. Serve very hot, dusted with powdered sugar. Instead of lemon you may flavour with noyeau, orange-flower water, &c.

Fruit Preserve Omelette.—Proceed as for sweet omelette, but, before beating up the eggs, add just enough jam or preserve to flavour the batter without weakening its consistency. A better way is to add the preserve in the pan before folding the omelette. Any jam, preserve, marmalade, candied peel, or preserved ginger can be appropriately put into a sweet omelette.

On Omelettes generally.—They should be cooked in a small pan, not more than six inches across. The omelette should be plump, very light and tender, and delicately browned. *Never turn omelettes in the pan;* it renders them flat and tough, whereas they should be juicy, succulent, and as soft as cream inside. Never be afraid of beating the eggs too much—to do so is practically impossible. Never serve gravy in the same dish, as it flattens and soddens what should be balloon-like and light. Serve the instant they are done on a very hot dish. Never cook them until five or six minutes before wanted, as the essence of a good omelette is that it should be hot, soft, thick, and fresh.

Pancakes.—Beat up well eight yolks and six whites of eggs in a quart of milk, make a paste of about half a pound of flour and a little milk, add to the eggs and milk, and when of the consistency of thick cream, put about half an ounce of butter into your frying-pan (which must be perfectly clean) and let it melt; then drop in sufficient batter, and fry on both sides to a good colour. Send to table in small quantities, hot and hot, on a hot dish garnished with cut lemon. Powdered loaf sugar and halved lemons should be served with them. A glass of brandy and a little powdered cinnamon or grated nutmeg improve the batter. A richer receipt is,—To six table-spoonfuls of flour add twelve eggs well beaten, a tumbler full of white wine, half a pound of butter which has been melted, and is nearly cold, the same weight of pounded lump sugar, a little grated nutmeg and powdered cinnamon, a quart of cream, and a wineglass of ratafia; mix it well; beat the batter for some time, and pour very thin into the pan. Strew with pounded white sugar; serve as before.

Rice Pancakes.—Boil half a pound of well-cleaned rice to a jelly, with a little water; when cold, mix with it a pint of cream, eight eggs well beaten, salt, and nutmeg to taste. Stir in eight ounces of butter just warmed, and as much flour as will thicken the batter. Fry and serve as before.

Chicken Fritters.—Take some new milk, and put to it in a stewpan as much flour of rice as will give it a tolerable consistency. Beat four eggs and mix them well with the rice and milk. Add a pint of cream, set it on the fire and stir well. Put in some powdered sugar, candied lemon peel cut small, and fresh grated lemon peel. Cut the white meat off a roasted chicken, pull it into very small shreds, and put it to the other ingredients, stirring the whole together. This will make a rich paste, which must be rolled out, cut into fritters, fried in boiling lard, or butter, till a good brown, and served very hot, with powdered loaf sugar in the dish.

Pig's Fry.—Take about a pound to a pound and a half of pig's fry, and put into a pie-dish in layers, the lean fry at the bottom and the fat fry at the top, season with minced sage, chopped onions, pepper, and salt. Cover the whole with a layer of potatoes, fill the dish with boiling water, and bake in a sharp oven for about two hours.

Lamb's Fry.—Serve as for Pig's Fry, season with parsley, egg, and bread crumbs, instead of the sage and onions.

Cold Meat Cookery.

Hashed Goose.—The remains of a roast goose should always be hashed. Cut the meat off the bones, and put the latter, broken, into a stewpan with a spoonful of chopped onions and an ounce of butter; pass over the fire until rather brown, when mix in a tablespoonful of flour, put in the cut up meat of the goose, season with pepper and salt, add about a pint of stock or water, simmer ten minutes or a quarter of an hour, dish and serve.

Hashed Mutton.—Cut all the meat off any cold joint of mutton, dredge with flour, and put it into a stewpan, with a slice of ham; add a little stock or water; season well with pepper, salt, and cayenne, and let it get thoroughly hot without boiling: when served, it thould be garnished with poached or sliced eggs and fried or toasted sippets. If mutton is hashed with fine herbs, it is done in the following way:—Take a piece of butter, add about a tablespoonful of chopped shallots, and put them on the fire for a short time, but not sufficiently long to turn brown; then add four spoonfuls of finely chopped mushrooms, a spoonful of chopped parsley, and a spoonful of flour; turn them all well in, and add about a pint of good stock, or a little water, seasoning with salt, pepper, and a little nutmeg; then put in the mutton, and let it get thoroughly hot, garnish as before.

Hashed Beef, Veal, Lamb, or Poultry.—Proceed as for mutton, stewing the bones with the meat in stock or

water, with whatever flavourings are preferred. Never use more stock or gravy than is necessary for the stewing, as hashes should never be watery. Garnish with plain dumplings, or sippets of fried or toasted bread. Hashes, like stews, should simmer, not boil. If more gravy is required when done, serve it separately in a tureen.

Curried Mutton, Lamb, Beef, Veal, or Poultry.—Proceed as for hashing, adding curry-powder to the mixture. Serve either with plain boiled rice, or when half done put the rice into the stew.

Hashed Game.—Take the best joints of any cold game, and put the bones and trimmings into a stewpan with a pint of water or stock, an onion, a bit of lemon peel, two or three cloves, and pepper and salt. When these have simmered for about an hour, strain and thicken with a little butter and flour; put in about a tablespoonful each of catsup and lemon juice, and a glass of port wine. Then put in the pieces of game, and let them gradually warm through, *but not boil.* Serve garnished with sippets. A little curry-powder is sometimes added, but it is seldom thought an improvement.

Hashed Venison.—Take any part of cold venison, and cut the meat neatly from the bones. Put the bones and trimmings into a stewpan with a little good gravy, and stew gently for an hour; then strain the gravy, add a glass of port wine, and half a one of catsup, and put in a thickening of flour and butter, give this one boil up, skim, and let it get a little cool. Then add the slices of meat, put on the side of the fire, and when just about to simmer, serve, with red-currant jelly.

Stew of Cold Veal.—Cut the meat from the bones of any joint of cold veal; cut into moderate sized pieces, and fry to a light brown with butter and a sliced onion; when done put on one side. Put the bones in cold water, and stew for three hours. This will make excellent soup or broth, which may be flavoured with parsley, celery, or any other vegetable. A pint of this broth, before any other flavour than parsley has been added, is needed for the meat, which put into a saucepan with it and stew gently for an hour. Add flour, a little catsup, cayenne pepper and salt. Give it a boil up, and serve with sippets of toasted or fried bread.

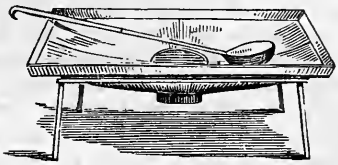
Turkey or Fowl Sausages.—Take the meat of a cold boiled or roasted turkey or fowl, and cut up small: if about a pound and a half, put a teaspoonful of chopped onions into a stewpan, with a piece of butter, pass a few seconds over the fire, then mix in gently a little flour and the mince, which moisten with a pint either of ordinary stock, or stock made from the bones: simmer some time, keeping it moved, season with pepper, salt, and sugar, add the beaten yolks of three eggs, stir in quickly over the fire, not allowing it to boil; pour out upon a dish till cold; just before ready to serve, divide it into equal parts, roll out each to whatever shape preferred, egg and bread-crumb twice over, fry in lard, or clarified dripping of a light brown colour, and serve very hot.

Cold Meat Minced.—Take the remains of any cold joints, and chop up fine with some fat ham or bacon; add a little salt, cayenne, grated lemon-peel, nutmeg, parsley and a few bread-crumbs. Put all into a saucepan, with two tablespoonfuls of cream, two beaten eggs, and two ounces of butter to every pound of chopped meat. Stir over the fire for five minutes. Let the mixture get cold, and then put it into light paste to bake, either in the form of patties or rolls. Or, when all ready, stew in gravy for about half an hour, thicken with flour, and serve in an open dish, very hot, garnish with forcemeat balls, or sippets of toast.

Cold Fowl or Turkey may be minced as above, adding, if liked, a little cayenne, pounded mace, savoury herbs, and two or three sliced or cut up eggs —hard boiled.

Poultry of all kinds may be served thus:—Take from the bones all the delicate meat, clear it from the skin, and keep covered until wanted for use. Stew the bones, well bruised, and the

FRYING PAN.



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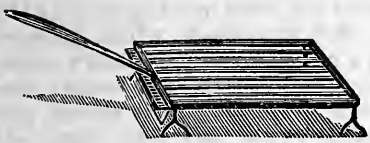
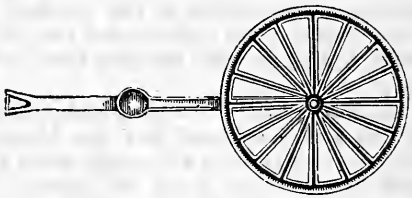


GRIDIRON.



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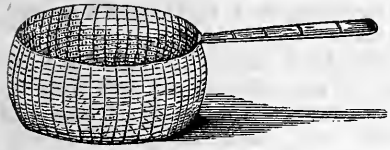
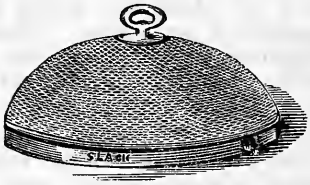
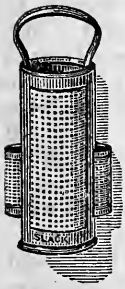


WIRE VEGETABLE STRAINER.

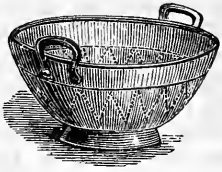


WIRE DISH COVER.



BREAD GRATER.

KNIFE BASKET.



COLLANDER.

KITCHEN UTENSILS.

To face p. 68.

skin, with a pint of water, until reduced to half, strain the gravy and let it cool; skim, and put it into a clean saucepan, with a gill of milk, three ounces of butter well mixed with a dessert-spoonful of flour, a little pounded mace, and grated lemon-rind; keep stirred until they just boil, then put in the meat finely minced, with three hard-boiled eggs, chopped small, salt and white pepper. Shake the mince over the fire until it is just ready to boil, stir to it quickly a squeeze of lemon; dish with pale sippets of fried or toasted bread, and serve quickly.

Beef or Mutton Pudding.—Boil some good potatoes until they are ready to fall to pieces; drain well in a sieve, clear them of all impurities and specks, mash, and make into a smooth batter, with two eggs, and a little milk. Then place a layer of rather thick slices of cold roast beef or mutton, seasoned with pepper and salt, at the bottom of a baking dish, cover them with the batter, and so on till the dish is full, adding a thin layer of butter at the top. Bake it till well browned.

Baked Beef.—Cut roast beef in slices and put them in a pie-dish, with alternate layers of thinly sliced onions, carrots, and turnips (which should all be first parboiled); season well with minced herbs, pepper and salt, add a little stock or gravy, cover with a crust of mashed potatoes, and bake for thirty to forty minutes in a sharp oven.

Fried Beef.—Slices of cold beef are excellent fried in butter, with sliced onions; well seasoned, and served with a little gravy.

Ragout of Beef.—Cut in neat and rather large pieces the meat off a joint of cold roast beef; put them in a stew-pan with a few sliced onions, pepper, salt, and spice, add a glass of boiling water and a little gravy or stock; simmer very gently for about two hours; serve hot with pickled walnuts or gherkins.

Ragout of Mutton.—Proceed as above adding a few turnips and carrots. Allow nearly an hour to stew.

Ragout of Veal.—Fry the meat to a light brown first; then stew for half an hour in a little gravy or hot water; thicken with flour and butter, and flavour with catsup, lemon juice, and a glass of sherry. Forcemeat balls improve it.

Fricasséed Fowl, Veal, Lamb, &c.—Take the meat and cut into nice pieces, without bone or fat. Make a gravy of the bones, &c., by stewing them with a little lemon-peel, savoury herbs, pounded mace, sliced onion, pepper and salt, in, say, a pint of water. When this is reduced to half, strain it, and add the meat. Warm it well, but do not let it boil, stir in a pinch of flour; mix the yolks of a couple of eggs in a gill of cream, and add it to the sauce; this must all get hot again, but *must not boil.* Serve in a covered dish.

Mutton Pie.—Take any cold mutton, and cut into small pieces; use very little fat, season with whole pepper and salt; when liked minced onions may be added. Put the meat in layers into the dish, add a little stock or rich mutton gravy, and a tablespoonful of mushroom or walnut catsup; cover with a good crust and bake in a moderate oven. This should be eaten very hot, and, when cut, a cupful of richly seasoned hot gravy should be put in. A sheep's kidney or two, sliced or cut small, is a great improvement.

Lamb Pie may be made in the same manner.

Cold Veal Pie.—Take a little of the veal and an equal quantity of ham; mince together, and season highly with salt, pepper, spices, and herbs chopped, and a small clove of garlic, or shallot when liked; pound in a mortar, add eggs and an equal quantity of veal gravy; cover the bottom of a pan with thin slices of bacon, lay a little of this forcemeat upon it, put some slices of the cold veal over the forcemeat, seasoning them with pepper and minced mushrooms; in this manner fill to the top, covering the whole with forcemeat; bake for an hour and let it cool; put into a pie dish, cover with a good paste crust, and bake for an hour and a half in a hot oven. When done put in a little good veal gravy or stock, well seasoned. This may be eaten either hot or cold.

Rabbit, Fowl, or Game can be substituted for the veal; but the veal forcemeat should always be used.

Pork Pie.—Take the remains of a loin or leg of roast pork, cut into tolerably thick slices without bone, beat it well with a rolling-pin; season highly with pepper, salt, and, if liked, sage. When the dish is full, add a little veal gravy, and bake in a moderate oven.

Devonshire Squab Pie.—Line the dish with a thin crust, put in a layer of sliced apples (peeled and cored), then a layer of slices of mutton, seasoned with pepper and salt, another layer of apples, another of mutton, and on top, a layer of onions sliced. Add some water or gravy, and bake in a moderate oven. Remains of poultry, roast pork, veal, or beef are frequently added to this pie.

Potato Pie.—Take some good potatoes, peel and slice them thin, and put them in your pie-dish with alternate layers of either beef, mutton, pork or veal; season well; add a little water or stock; put on a good crust, and bake. A few slices of kidney improve this pie.

Cold Fish Pie.—Any remains of cold boiled turbot, cod, sole, lobster, salmon or whiting may be made into a very savoury pie thus:—Remove the meat from the bones, without breaking it too small, and season with whole pepper, salt, a clove or two, a little grated nutmeg, and some sweet herbs, minced fine. Lay the fish in the dish with two or three hard-boiled eggs, cut small, a sliced onion (when liked), and two or three bits of butter; add a little water or stock, cover with a good crust, and bake. The remains of a salmon and a lobster (or some lobster or shrimp sauce) make a capital pie. By the same rule a few blanched and bearded oysters, or a little cold oyster sauce improves cod pie. In these latter cases the hard-boiled eggs are better left out.

Cold Cod may be dressed in several ways—either curried, or served with cream, or béchamel sauce (*see* receipt). The first way is to break the fish into flakes and fry it with a sliced onion in butter. Put it into a stewpan with a little white stock, and a bit of butter, rolled in flour; simmer for ten minutes; then mix together a gill of cream, a bit of butter, and a salt-spoonful of curry powder; add these to the fish, give it all one boil up, and serve. If to be served with cream, substitute lemon juice for the curry, and let it warm, *but not boil.* With béchamel sauce, put a gill of the sauce into a stewpan with butter, and when melted add some pepper, salt, and the flakes of fish; when warm through, dish, pour over a little butter, sprinkle some bread crumbs, and brown with a salamander; garnish with fried or toasted sippets.

Bubble and Squeak.—Fry some thin slices of cold boiled beef in a little butter; take them out and keep hot. Squeeze dry some cold cabbage or savoy, and mince it small; put the cabbage into the butter, with a sliced onion, pepper and salt, and fry gently for some little time. Serve very hot, the cabbage under the meat. Of course freshly boiled cabbage will answer the same purpose. Sliced cold potatoes are often fried with the cabbage.

Hodge Podge.—Mince some cold roast mutton, lamb, or veal, and slice up a few green onions and a couple of lettuces; simmer these gently in a stewpan, with a little butter, pepper and salt, and sufficient water or stock to moisten them, for three-quarters of an hour, stirring from time to time. Serve very hot. A few green peas, boiled separately and put into the stew just before serving, greatly improve it.

Pepper Pot.—Put two quarts of water in a large stewpan, and add, cut small, such vegetables as are in season; in summer, peas, lettuce, spinach, and two or three onions; in winter, carrots, turnips, onions, and celery. Stew them with two pounds of mutton, or the meat off a cold fowl, and a pound of pickled pork, till they are tender—the meat should be cut small. While boiling, skim, and half an hour before serving, clear a lobster or crab from the shell, and put the meat into the stew: to which some add small suet

dumplings. Season with salt and cayenne. A little rice may be boiled with the stew. The lobster is of course not necessary, but it greatly improves the flavour. When ready to serve strain off part of the gravy, dish, make the top smooth, sprinkle cayenne liberally over it, and brown the top with a salamander. Any cold meats may be used instead of or with the mutton or fowl.

Sick-Room Cookery.

Hints.—In addition to the receipts which follow, there are numerous others;—such as plainly dressed poultry, meat and fish, light nourishing soups, jellies, cooked fruits, and light puddings,—that may be eaten during the progress towards convalescence.

Be scrupulously neat and clean in all preparations for the sick-room, and let everything be served on snow-white cloths.

Never allow food to remain at the patient's bedside; if he does not care to eat it when brought to him, take it away, and bring it, or something else, when wanted.

A little jelly, beef-tea, lemonade, toast and water, broth, or milk should always be ready to take up the instant the patient asks for it, as with invalids the desire to eat soon passes away.

Do not quite fill cups, glasses, basins, as a dirty saucer or tray is a great irritant, and a soiled sheet or pillow an absolute worry to a sick person.

Let every article of food intended for the patient be well and carefully dressed; and remember that fat is almost always distasteful.

Hard-boiled eggs are very difficult of digestion, but the whites should be set, or the *slimy* appearance of the egg will create nausea.

Toast and water should be made some time before it is wanted, and allowed to stand till quite cold.

The smaller the quantity, and the greater the variety of the food, the more appetizing will it appear.

Gruels and Porridges.—For the sick room various slight preparations of oatmeal, flour, &c., may be readily prepared. These, when nicely cooked and properly flavoured, are very grateful to the palate of the invalid.

Water Gruel.—Mix two table-spoonfuls of fresh oatmeal in a quart of water, and set it on a clear fire. When just ready to boil, take it off and pour it backward and forward from one basin to another several times. Then set again on the fire, and let it just come to the boil, when it should be turned into a basin and allowed to settle. If thoroughly cooked it will not need to be steamed; but if any lumps appear in it, steam through a hair sieve. Add a little salt to taste.

Another Way.—Mix a little fine oatmeal in a small quantity of cold water, then adding the rest of the water, and boiling very gently, until it becomes sufficiently thick to be agreeable; season with salt or sugar.

Emden Groat Gruel.—Emden groats are crushed oats deprived of their outer skins. These are very gently boiled for a long time, and being passed through a sieve, to separate the groats, the gruel has soon the appearance of a fine jelly. It is then eaten with sugar, and if there be no inflammatory symptom, with the addition of a little sherry wine, or brandy. In this state it is very wholesome, as it satisfies the appetite without fatiguing the stomach. In France, gruel is made with the water in which crushed oats have been previously steeped, the oats being stirred up from time to time, to allow the water to take up the starch. Milk may be used for making gruel, instead of water, when a milk diet is necessary.

Rice Gruel.—Soak two table-spoonfuls of fine rice in cold water for half an hour. Pour off the water, and to the rice add a pint or rather more of new milk. Simmer gently till the rice is tender, then pulp through a sieve and mix with the milk. Heat over the fire, add a little more milk gradually, pour off to cool, and flavour with salt or sugar; and, in some cases, with sherry or other white wine.

Bread Pap.—Pour scalding water on white bread, mash, strain, and add new milk, seasoned with sugar.

Oatmeal Pap. — To two-thirds of water gruel, when cool, add one-third of unboiled new milk, and warm up, flavoured with salt or sugar.

Another Method.—Stir into a pint of water three table-spoonfuls of fresh oatmeal, let it stand till clear, and pour off. Put a pint of fresh water to the oatmeal, stir well, and leave till next day. Strain the liquor through a sieve, and set it in a saucepan over a clear fire. Add about half as much milk, gradually, while it is warming, and when it is just ready to boil, take it off, pour it into a basin, and set it by to cool. Add thereto a little salt or sugar.

Arrow-Root.—Put a full dessert-spoonful of good arrow-root into a basin, and mix with it as much cold new milk as will form a paste. Pour thereon half a pint of milk scalding hot, and stir it well to keep it smooth. Set it on the fire till it is ready to boil, take it off, pour it into a basin, and let it cool. Flavour with sugar, and, for convalescents, add a little wine. It is not usual to boil the arrow-root at all.

Sago. — Soak a table-spoonful of sago in cold water for an hour, then pour off the water, and substitute a pint of fresh; simmer gently till reduced to about half the quantity; then pour it into a basin to cool; flavour with sugar, salt, or wine, to taste.

Rice Milk.—After washing the rice, set it over the fire for half an hour, with a little water. Gradually add some warm milk, till the whole is of proper consistency. Season with salt or sugar.

Ground Rice Milk.—Make a large spoonful of ground rice into a batter with new milk. Set a pint of new milk over the fire, and when it is scalding hot, stir in the batter, and keep stirring, one way, till it thickens, but do not allow it to boil. Cool in a basin, and flavour with salt or sugar.

Millet Milk.—Wash three table-spoonfuls of millet seed in cold water, and put it into a quart of new milk. Simmer gently till it is moderately thick; pour it into a basin to cool, and flavour with salt or sugar.

Barley Water. — To a handful of barley add three pints of water. Simmer gently till of a proper thickness, strain and flavour with salt or sugar.

Pearl Barley Water.—To an ounce of pearl barley add half a pint of cold water, set it on the fire, and when hot pour off the water, and add a quart of fresh. Simmer for an hour, strain, season and let it cool.

Apple Water.—Slice two or three ripe apples, without paring, into a jug, pour on a quart of scalding water, let it stand till cool, and season with sugar.

Toast and Water.—Toast a slice of new bread quite brown, but not burnt, and then put it in a jug of boiling water. When quite cold remove the toast, and it is fit for drinking. Burnt bread ruins toast and water.

Sippets.—Toast nicely brown some thin slices of white bread, cut into diamonds and pour over them some good hot gravy, without butter.

Caudle.—Make a smooth gruel of good grits, and when well boiled, strain, stirring occasionally till cold; add sugar, wine, lemon peel, and nutmeg. A spoonful of brandy may be added, and also lemon juice.

Another Way is, to boil some water, put therein grated rice, that has been mixed with cold water, and when properly thickened, add sugar, lemon peel, cinnamon, and a glass of brandy. Boil the whole together. If used cold, boil a quart of water, and after it has stood, add the yolk of an egg, the juice of a lemon, six spoonfuls of sweet wine, sugar, and syrup of lemons. For brown caudle, make a gruel with six spoonfuls of oatmeal, and strain. Then add a quart of good malt liquor, boil, sweeten, and put in half a pint of white wine, with spices or not, to taste.

Jellies. — Though there is little real nourishment in jellies, they are very grateful to weak stomachs, and can be eaten when almost every other food is rejected.

Tapioca Jelly.—Wash the tapioca in three or four waters, then soak it again in fresh for five hours, and sim-

mer till quite clear. Add lemon juice, wine, and sugar.

Isinglass Jelly.—Boil one ounce of isinglass, with a few corns of pimento and a crust of bread, in a quart of water. Simmer till reduced one half, and strain. It may be flavoured with wine.

Gloucester Jelly.—Take of rice, sago, pearl barley, and shavings of harts-horn, one ounce each. Simmer in a quart of water till reduced to a pint. Add wine or milk.

Buttermilk.—Place milk in a small churn, and when it has stood about ten minutes, begin churning, continuing to do so till the flakes of butter appear, and the discharged milk is thin and blue. Strain through a sieve, and it is fit to drink.

Possets, Wheys, &c.—Various preparations of milk, eggs, and wine are useful in the sick-room, but they should only be given to the patient when ordered by the doctor, or under the direction of an experienced nurse.

Wine Posset.—To a quart of new milk, add the crumb of a penny loaf, and boil the whole till the bread is soft, then take it off, grate therein half a nutmeg, and some sugar, put it into a basin, with a pint of Lisbon wine, very gradually, or the curd will be hard and tough. Serve with toast.

Sack Posset.—Beat up twelve eggs, and strain; then put half a pound of lump sugar into a pint of sherry and mix the same with the egg. Set over a chafing dish, and stir till scalding hot. In the mean time, grate some nutmeg in a quart of milk, and heat it; then pour it over the egg and wine, stirring it all the while. Then take it off, set it before the fire half an hour, and it will be ready. *Another method.*—Take a quart of new milk, four Naples biscuits, crumble them, and when the milk boils, throw them in. Give it another boil, then take it off, grate therein some nutmeg, and sweeten it to taste, add half a pint of sherry, stirring it all the time.

Brandy Posset.—Boil a quart of cream, with a stick of cinnamon in it, over a slow fire, and take it off to cool. Beat up the yolks of six eggs, mix the same with the cream, add some nutmeg and sugar to your taste, set it over a slow fire, and stir it all one way, then it appears like a fine custard, pour it into a basin, add a glass of brandy, and serve.

Ale Posset.—Put a little bread into a pint of milk, set it over the fire and when it boils, add a pint of strong ale, with nutmeg and sugar. Let it stand a few minutes to clear, and the curd will float on the surface.

White Wine Whey.—Put a pint of new milk, and half a pint of white wine, into a basin, and let it stand a few minutes; then pour over it a pint of boiling water, let it settle, and the curd will fall to the bottom. After this, pour the whey into another basin, and add a little sugar, and a slice of lemon.—*Whey may also be made* with lemon or vinegar, and when clear, diluted with boiling water and sugar. This will excite perspiration.

Mustard Whey.—To half a pint of boiling milk add a table-spoonful of made mustard. Strain from the curd, and administer. It will produce a glowing warmth.

Curds and Whey.—Although considered by many as a light dish, curds are heavy of digestion. Curds and whey is made simply by milk turned with rennet, and sweetened. Various kinds of curds and whey are in use under several names, but the differences between them consist entirely in the flavouring.

Naples Curd.—Boil a little cinnamon or nutmeg for a few minutes in a quart of milk, stirring in the well-beaten yolks of eight eggs, and a little white wine; boil, and strain through a sieve; beat up the curds with a little orange flower water, and powdered sugar; put into a mould to give shape; when compact, serve in a dish with a little fresh and sweetened cream.

Mulled Wine.—Thoroughly boil some spice and sugar in a little water till well flavoured, then add an equal quantity of wine. Serve with toasted bread. Some add to mulled wine the yolks of eggs well beaten, and mixed with a little cold water, then poured backwards and forwards from the

basin to the saucepan. *Another way* is, by boiling a little cinnamon and some grated nutmeg a few minutes in a large tea-cupful of water, then pour to it a pint of port wine, and add some sugar; beat it well up, and it will be fit to drink.

Beef Drink.—Take off the fat and skin from a pound of lean beef, and having cut the meat in small pieces, put it into a gallon of water, with some toasted bread and a little salt; boil till reduced one half, and when cold take off the fat.

Cool Drink.—Beat up a new-laid egg, and mix with it half a pint of new milk warmed, a spoonful of capillaire, as much rose-water, and a little scraped nutmeg. It must not be warmed after the egg is put in.

Asses' Milk.—This useful drink for consumptive patients should be milked into a glass, kept warm by being set in a basin of hot water. A teaspoonful of rum may be added just before it is drank.

Lemonade.—For domestic use the addition of a small quantity of tartaric acid to carbonate of soda, to cause effervescence, makes an agreeable and wholesome drink.—Or the addition of sugar to lemon juice and water, makes a nice cool beverage. Tamarinds, currants, cranberries, or capillaire, added to hot water, and allowed to cool, make good drinks for invalids.

Barley Lemonade.—Put a quarter of a pound of sugar into a small stewpan with half a pint of water; boil till it forms a thickish syrup; then add the rind of a fresh lemon and the pulp of two lemons. Boil for a few minutes, add two quarts of barley-water, strain when cool, and bottle for use.

Barley Orangeade. — Made in the same way by substituting the rind and juice of oranges, to which lemon juice is a great improvement.

Broths.—The best broths are made from mutton, veal, chicken, eels, and beef; their value as food being reckoned according to this order of placing.

Mutton Broth.—Take a pound and a half of scrag of mutton; break the bone, and put into a stewpan with a good pinch of salt, and from three pints to two quarts of cold water. Let this simmer very gently for two hours and a half, skimming off every particle of fat. Serve plain. *Another plan* is to take the same quantity of meat and water, and stew for two hours and a half, with half a tablespoonful of salt, a dust of moist sugar, a button onion or two, a small stick of celery, and a slice or two of turnip. When beginning to boil draw it to the side of the fire, and let it simmer for two hours and a half, skimming off all the fat. Strain it through a fine hair sieve. The meat, if permitted, may be served separately. Pearl barley is an agreeable addition to mutton broth. Put in with the meat, say a tablespoonful, when first put on, and stew in the broth. It must not in this case be strained, but, after carefully skimming, remove the meat and vegetables. Vermicelli may be added after the broth is strained, just giving it ten minutes steady boiling. Rice when added should have twenty minutes' boiling. Perhaps the best of these additions is arrowroot. After straining the broth, put it back in the pan, and when it boils up, stir in half a teaspoonful of arrowroot — previously made into a smooth paste, with a little cold water, and let it simmer for ten minutes.

Veal Broth.—Take two pounds of knuckle of veal; and cut up into small pieces, with a little bit of butter; a few slices of carrot, turnip, and onion, a small stick of celery, and a pinch of salt; put these on in a stewpan, and stir for about ten or twelve minutes; then add about two quarts, or a little more of hot water, and let the whole simmer for an hour and a half, skim, and strain through a hard sieve. Arrowroot, rice, or vermicelli may be added in the same way as directed for mutton broth. A calf's foot, split and boned, may with great advantage be stewed with the veal. If onions be disliked, they may be omitted.

Chicken Broth.—Take the half of a small chicken, and put it on the fire in about a quart of cold water, with a small stick of celery, a bit of parsley, and a pinch of salt; when it boils

skim thoroughly, and let it simmer for about an hour. Strain as before. A teaspoonful of flour may be added as thickening. When the broth is strained put it back on the fire, and let it boil up, then add the flour, mixed to a paste with a little cold water, stir in, and simmer for fifteen minutes.

Eel Broth.—Put a young eel or two cut up small into three pints of water, with parsley, and a few peppercorns; let the whole simmer till the eels are broken, and the liquor reduced to half the quantity. Add a little salt. An excellent and nutritious broth may also be made in the same way from Tench.

Beef Tea.—Take a pound of lean gravy beef without bone, and cut into small dice; put on in a quart of cold water with a little salt. When it boils up skim carefully, and let it simmer very gently for thirty or forty minutes. Strain very carefully and put aside for use. Beef tea is always better if made the day before it is wanted, and then warmed up, as when cold *every particle* of fat can be removed. If wanted very good use a larger proportion of meat to the quart of water.

Baked Beef Tea.—Cut up one pound of meat as before, and put it in a warm oven, in a jar, with nearly a quart of water, and a pinch of salt. Simmer *very gently indeed* for several hours. If put at night into an oven that has been very hot all day, and allowed to remain in till the morning, it should be done. Then strain as before. When allowed, beef tea is rendered more savoury by the addition of an onion, a few herbs, and a clove.

Beef Tea in Ten Minutes.—When beef tea is wanted in a great hurry get some lean beef, put it on a board, and scrape it with a very sharp knife into shreds. Put into a stewpan, pour a tumbler of *boiling water* over it, and let it stand by the fire, covered, for ten minutes. Then strain it into a tumbler, which place in very cold water, remove the fat, pour into a warm teacup, stand it in hot water, and when warm enough serve. A piece of *Liebig's Essence of Meat*, about as large as a walnut will make a pint of good beef-tea. Put the extract into a cup, and pour over it *boiling* water; stir for two or three minutes, and add salt to taste.

Rabbits Stewed in Milk.—Make into a smooth paste two teaspoonfuls of flour and a little milk; then add about a pint and a half more milk, which must be very good and fresh. Cut up into small joints two *very* young rabbits; put into a stewpan with the milk, a blade of mace, and salt and pepper to taste; stir from time to time, and simmer very slowly for about half an hour. This may be eaten either hot or cold. This quantity would suffice the invalid for four meals, so that half may be made.

Stewed Cutlet.—Take off all the fat from a nice mutton cutlet, and put into a stewpan with a third of a pint of cold water, half a stick of celery, pepper and salt; simmer very gently for fully two hours, skimming from time to time. *The water must never be allowed to boil.* Strain the broth and serve with the cutlet. When celery is not liked, omit it; and substitute a few sweet herbs.

Stewed Calf's Foot. — Stew a blanched calf's foot in a pint of milk and the same quantity of water, for about four hours, simmering gently all the time, with a flavouring of a little lemon-peel, mace, pepper, and salt, and when liked a little celery and onion. Stir in a gill of cream five minutes before serving. Take out the onion and celery.

Mutton Chop.—Remove nearly all the fat, broil well over, or in front of a clear fire, and serve very hot without gravy or sauce; with pepper and salt by the side of the plate. *Lamb Chops* are not recommended for invalids.

Boiled and Roast Fowl.—These invalids' luxuries will be found under the heads *Roasting and Boiling.*

Puddings and Pies.

Yorkshire Pudding.—Beat up well, and mix gradually with six heaped tablespoonfuls of flour and a teaspoonful of salt, six eggs; then pour in by degrees as much milk as will reduce

the butter to the consistence of rather thin cream. Beat the batter briskly and lightly the instant before it is poured into the pan, watch it carefully that it may not burn, and let the edges have an equal share of the fire. When the pudding is quite firm in every part, and well coloured on the surface, it is done. If put under a roasting joint, it may be made thicker than if simply baked by itself. Pour off the fat before serving.

Pease Pudding.—Take a quart of split peas, and dry them thoroughly before the fire: then tie them up loosely in a cloth, put into warm water, boil, until quite tender; take them up, beat them well in a dish with a little salt, the yolk of an egg, and a bit of butter. Make the whole quite smooth, tie it up again in a cloth, and boil it an hour longer. Serve with boiled pork.

Batter Pudding.—Mix smooth with a little milk three good tablespoonfuls of flour; add a pint of milk and a bit of butter, stir well; beat up with a little salt, three eggs, or four small ones. Boil for an hour in a well-floured cloth that has been wrung out of boiling water. This pudding is eaten with jam, stewed fruits, or marmalade, or served plain with sweet sauce. It may also be baked—putting it into a buttered dish or tin, or several cups, and baking in a moderate oven for about half an hour.

Yeast Dumplings.—Take half a quartern of bread-dough—that made with milk is best—put it in front of the fire for five minutes, make it into about eight or nine dumplings, put them into boiling water, and boil for eighteen to twenty minutes. Serve instantly.

Suet Pudding.—Chop very fine six ounces of beef suet, add six ounces of flour, and two ounces of crumb of bread, grated, a little salt, a pint of milk, and six eggs well beaten; mix the whole well together, and boil in a cloth for four or five hours; serve plain, to eat with meat, or with sweet sauce.

Cheese Pudding.—Put into a saucepan half a pound of good grated cheese, with a pint of new milk, six ounces of grated bread crumbs, and two eggs well beaten; stir well, till the cheese is dissolved; then put it into a buttered dish, and brown it in a Dutch oven, or with a salamander. Serve quite hot.

Hasty Pudding.—Put a quart of water on to boil; stir six tablespoonfuls of Indian meal or rye-meal—sifted — thoroughly into a bowl of water; when the water in the saucepan boils, pour into it the contents of the bowl, stir up well, and let it boil up thick, put in salt to taste; then sprinkle in meal, handful after handful, stirring it all the time, and letting it boil between whiles. When it is so thick that you stir it with difficulty—it is done. It takes about half an hour. Eat it with milk or molasses. If the system is in a restricted state, nothing can be better than rye hasty pudding and West Indian molasses. Dyspepsia is greatly relieved by it. Be careful to observe that Indian corn in all its preparations requires *thorough* cooking, If not sufficiently done, it loses its flavour and becomes indigestible.

Hominy Pudding. — This may be either baked or boiled. Mix the hominy (Indian corn bruised) which has been previously boiled, either in milk or water, with eggs, a little sugar and nutmeg, a little chopped suet, and with or without currants and raisins, as preferred. Tie up in a basin, and boil two hours, or put into a pie dish, and bake in a moderate oven.

Potato Pudding.—Take two or three pounds of boiled potatoes (cold ones will do), pound them in a mortar with from half a pound to a pound of butter, previously melted for the purpose, the same weight of pounded loaf sugar, a quarter of a pound of blanched sweet almonds bruised, a little grated nutmeg, and half a glass of ratafia, or other liqueur (brandy will do if no liqueur at hand). Boil in a cloth, or a buttered basin, and serve with sweet sauce (*see* Receipt).

Bread Pudding. — Take any good pieces of stale bread, and scald them in boiling milk or water. When cold mash the bread, and having laid in the bottom of a pudding dish some preserved gooseberries, currants, or other fruit, jam, or marmalade, add the bread; then pour over it some good

milk, three well beaten eggs, and a little orange-flower water; bake for half an hour. Grate nutmeg over the top when served.

Brown Bread Pudding.—A capital pudding is made of stale brown, or even white bread, by cutting it into thin slices, and browning it in a moderate oven, then reducing it to a very fine powder, and soaking it in as much gin, rum, or brandy, as it will fairly absorb. Whip up the yolks of a few eggs, and make the whole into a paste. Then whisk the whites of the eggs very stiff, add to them some sliced candied peel—citron is best—and a little powdered cinnamon. Mix all well up together, put into a buttered dish or mould and bake in a moderate oven for an hour to an hour and a half. Make a sauce of a few blanched and sliced almonds, currants, or raisins, candied peel—cut up very small—made hot in a little port or Burgundy, and pour over the pudding. For economy the sauce may be dispensed with.

Plum Pudding.—There are various excellent receipts for making a Christmas pudding, and we have selected a few of the best for this English dish. Christmas puddings may be made in the autumn, boiled so that another hour's boiling will suffice, taken out of their cloths, and put into a dry place until wanted, then put into boiling water, boiled fast for one hour, and served.

1. Put into a large basin one pound of fine Malaga raisins (picked and stoned), one pound of best currants (well washed in several waters, dried in a coarse cloth, and carefully picked), three-quarters of a pound of powdered loaf or fine brown sugar, one pound of sweet beef suet (chopped moderately fine), half a pound of beef marrow (cut up small)—if beef marrow cannot be obtained use another half pound of chopped suet; eight ounces of candied peel — citron, lemon, and orange mixed — (sliced very thin), two ounces of ground or finely chopped sweet almonds, five ounces of flour, and five ounces of fine bread crumbs. Add a grated nutmeg, or half a stick of powdered cinnamon, and a teaspoonful of salt, and mix the whole thoroughly with a little milk, a glass of brandy, and ten or twelve eggs (previously thoroughly beaten up together). It may then be either boiled in a well-floured cloth, or a pudding mould, tied up in a cloth. Put into a large saucepan full of boiling water, and let it boil fast for fully six hours—if in a mould one hour longer. Turn out carefully, cover the top with powdered sugar, decorate with a sprig of holly, and send to table very hot, with a little blazing brandy in the dish. Of course the holly and lighted brandy belong only to Christmas. Brandy sauce (*see* Receipt) usually accompanies Christmas plum pudding.

2. One pound and a half of finely-chopped beef suet, one pound of grated bread, one pound of well-washed currants, one pound of stoned raisins, one glass of brandy, half a nutmeg grated, a teaspoonful of salt, eight eggs, leaving out half the whites, a small quantity of loaf sugar (in powder), and a few bitter almonds. Boil in a floured cloth for six hours. Serve as before.

3. Half a pound of potatoes, a quarter of a pound of carrots, well-boiled and worked through a colander, a tablespoonful of treacle, half a pound of currants, half a pound of raisins, quarter of a pound of moist sugar, quarter of a pound of suet, well chopped, four ounces of candied peel, a little grated nutmeg, and salt, half a pound of flour; mix all together the night before wanted, and boil hard for four hours.

4. Take one pound of suet, chopped fine, one pound of grated bread, one pound of carrots (boiled and passed through a colander), one pound of raisins, stoned, half a pound of currants, the rind of half a lemon shred as fine as possible, four eggs, a glass of brandy, a little grated nutmeg and salt, and as much milk as will make it a proper consistence; boil it nine hours, and serve as before.

5. Take half a pound of grated bread or flour, half a pound of suet,

three ounces of brown sugar, half a pound of currants, half a pound of raisins, a wineglass of brandy, the yolks of five eggs and whites of two, one nutmeg, grated; a little salt; candied peel to taste. Mix well and boil four hours.

6. Take half a pound of suet, chopped fine, half a pound of grated bread, half a pound of raisins, stoned; half a pound of currants, the yolks of three eggs, and the whites of two, a little nutmeg, two spoonfuls of sugar, and a salt-spoonful of salt. Boil six hours; serve as before.

7. Take one pound of fresh beef suet, finely minced, add a pound of raisins (stoned and chopped), the same weight of currants (well washed, dried and picked), half a pound of flour, half a pound of grated bread, the peel of a lemon grated, half a nutmeg, grated, eight eggs well beaten, six ounces of candied citron, lemon, and orange peel, half a pound of brown sugar, a tea-spoonful of salt, a glass of brandy, and a tea-cupful of cream or milk; mix all these ingredients well together, put them into a floured cloth, and boil for about seven hours, taking care that it does not stop boiling during that time, and keeping the vessel well filled up with boiling water as it wastes; before serving, strew powdered loaf sugar over it. Serve with brandy sauce (*see* Receipt).

Baked Plum Pudding. — Scald a French roll in boiling milk, when the bread has become well soaked, drain off what milk remains, and, with a silver spoon, beat the bread to a pap, to which add a quarter of a pound of well cleaned currants, a quarter of a pound of melted butter, a little lemon peel and nutmeg, grated, a few blanched sweet almonds (chopped fine), and the yolks of four eggs well beaten, and sweeten to palate; mix all well together, pour into a buttered pie dish, and bake for half an hour. This pudding is better eaten cold.

Family Plum Pudding. — Take a pound of flour, half a pound of beef suet, minced fine, half a pound of well washed currants, the rind of half a lemon grated, a few bitter almonds, grated, a little nutmeg, a pinch of salt, and an ounce of brown sugar; mix all these ingredients well together with four eggs, well beaten, and a little milk; pour into a buttered pie dish or tin, and bake in a moderate oven for an hour. When done, turn it out, and strew it over with powdered lump sugar.

Mince-Meat Pudding.—Slice up a stale Savoy cake, and fill up a pudding mould with it and mince-meat made thus :—Mince *separately, very finely,* two pounds of kidney beef suet, a quarter of a pound of mixed candied peel, half a pound of cooked beef—very lean—and two pounds of apples. Put all these things into a pan with two pounds of fine currants (washed, dried, and picked), a pound of raisins (stoned and chopped fine), a pound of moist sugar, and an ounce of mixed spice. Mix well together, and then add a gill of lemon juice, and about half a bottle of brandy. Mix these thoroughly until the whole is wet, but firm; then put into jars, and cover over with bladders to keep them air-tight; a little cinnamon, or ginger, or a few cloves may be added at will, and the quantity of citron peel increased. In a week this is ready for use. When the mould is full pour in some custard; bake for about half an hour.

Roly Poly Pudding.—Roll out some pudding crust (*see* Paste), and cover one side with any jam, marmalade or mincemeat. Roll up till it is the same shape as a large sausage, and tie it up rather loose in a floured cloth, carefully securing the ends. Put on in boiling water, and boil for about two hours, or longer if the pudding is very large, and serve either whole or in slices, with sweet sauce (*see* Receipt). A variation of this pudding is to substitute raisins and sugar for the jam or marmalade.

Lemon Dumplings.—Chop fine four ounces of suet, and mix with eight ounces of bread-crumbs, four ounces of brown sugar, and the grated or finely-minced rind of a lemon. Mix thoroughly, add the juice of the lemon, strained through muslin; then

add two beaten eggs, stir until the whole is amalgamated, then put into small buttered tins or cups, tie over, and boil fast for nearly an hour. Serve with powdered sugar and wine sauce (*see* Receipt).

Apple Dumplings.—Peel and core half a dozen large apples, sugar to taste cover each of them with crust, tie in floured cloths, and boil for about three-quarters of an hour. Take off the cloths and serve hot. These may be baked, by putting them into a baking-dish or tin, without cloths, and baking in a moderately hot oven for thirty to forty minutes, or even longer if the apples be large.

Currant Dumplings.—Take six or seven ounces of finely-chopped suet, and mix it with a pound of flour; clean three-quarters of a pound of currants, and add to the flour and suet, then make the whole into a soft dough with milk (water will do, but milk is far better); divide this quantity into about eight dumplings, drop them into a saucepan of boiling water, and boil hard for about forty minutes; shake the saucepan now and then to prevent them sticking. They may also be tied up in cloths, and will then require more than an hour's boiling.

Egg Pudding.—Mix together thoroughly the yolks of eight, and the whites of three eggs, well beaten, half a pint of rich cream, half a pound of good brown sugar, a little flour, a little grated nutmeg, and a glass of brandy; melt half a pound of butter, add the above to it when nearly cold, and put the whole into a dish lined with puff paste; bake in a slow oven for twenty minutes.

Plain Custard.—This very agreeable accompaniment to fruit tarts is made thus:—Boil in a quart of milk, a bit of cinnamon, lemon peel, and grated nutmeg; when this is nearly cold, strain, and mix with it a tablespoonful of flour, the yolks of eight, and the whites of four eggs, well beaten; boil in a buttered basin for half an hour. A better way is to add a few ounces of sugar to the mixture, and bake in a very slow oven for half an hour. You may flavour with bitter almonds instead of lemon, and by using part cream, and increasing the number of eggs, enrich the custard.

Another and Simpler Mode is to mix a quart of new milk with eight eggs well beaten, strain through a hair sieve, and sweeten to taste; add a quarter of a saltspoonful of salt, and pour the custard into a deep dish, with or without a lining or rim of paste; grate cinnamon or nutmeg and lemon-peel over the top; and bake in a very slow oven thirty minutes, or even longer, should it not be firm in the centre. A custard, well made and properly baked, will appear quite smooth when cut, and there will be no whey at the bottom.

Custard Pudding.—Butter and pepper a mould, and put in, broken in pieces, the remains of any kind of pudding, such as plum, cabinet, or college, fill up with custard, and bake for about half an hour.

College Pudding.—Chop very fine half a pound of beef suet—beef marrow is better—and add to it half a pound of well-cleaned currants, four ounces of bread-crumbs, three well-beaten eggs, a little nutmeg and salt. Add half a glass of brandy, and sufficient milk to reduce the whole to a proper consistency; put into small moulds or cups, bake for about half an hour, and serve with wine sauce (*see* Receipt).

Cabinet Pudding.—The best way to make this favourite pudding is to butter the inside of a round basin or mould, and stick about it some dried cherries, or raisins, then about three parts fill the mould with sponge cake, interspersing a few ratafias, over which sprinkle a glass of brandy. Then have ready the following custard: boil a pint of milk, in which infuse the rind of two lemons, cut thin, in a basin; have six whole eggs, which well whisk, with a quarter of a pound of powdered loaf sugar, and add the milk by degrees; pass through a strainer and fill up the basin or mould, round the edge of which place a band of buttered paper; have a convenient-sized stew-pan, with about two inches in depth of boiling water, place in

your pudding, cover a sheet of paper over, and let simmer gently over the fire, keeping the stew-pan covered until the pudding becomes quite firm, when serve thus: take out, detach the paper, and turn from the mould over upon a dish; have ready the following sauce: put half a pint of melted butter into a stew-pan, into which stir the yolks of two eggs, and add a glassful of brandy, with the juice of a lemon, and sufficient sugar to sweeten it; stir over the fire until it becomes a little thick, when pass it through a strainer; sauce over the pudding, and serve. Many persons prefer the sauce served separately in a tureen.

Fig Pudding.—Chop very fine half a pound of good figs and six ounces of beef suet; mix the latter with twelve ounces of grated bread-crumbs, then add the figs, six ounces of moist sugar, and a little nutmeg; bind the whole well with an egg, and add a gill of good milk or cream. Boil in a mould for about four hours, and serve with sweet sauce (*see* Receipt).

Ginger Pudding.—Mix over the fire half a pound of flour and the same quantity of butter; pour in gradually a quart of boiling milk; when thoroughly amalgamated, put in half a pound of shredded preserved ginger, and the yolks of six or eight eggs, previously well beaten. Mix well, and let it stand; then whisk the whites until very stiff, add them lightly, put into a buttered and papered mould, and bake in a slow oven for nearly two hours.

Citron Pudding.—Line a pie-dish with puff-paste (*see* Receipt), and put into it—previously well mixed together—the yolks of seven eggs well beaten, a quart of good milk—cream is better—two table-spoonfuls of flour, half a pound of powdered loaf-sugar, a little nutmeg, half a pound or more of candied citron peel, sliced very thin and then cut small, and a glass of any liqueur or brandy. Bake in a slow oven. This pudding is delicious.

Castle Pudding.—Take six ounces each of fresh butter, flour, and powdered loaf sugar. Let the butter half melt before the fire, then beat it into a cream. Then beat the yolks and whites of three new-laid eggs separate and then together for fully a quarter of an hour. Mix the butter and eggs together, add the sugar, and then the flour by degrees; flavour with a little grated nutmeg and lemon peel. Lightly butter half a dozen cups, divide the mixture between them, and bake for half an hour in a slow oven; turn them out and serve with powdered sugar.

Jenny Lind's Pudding.—Take the half of a stale loaf, and grate the crumb; butter a pie-dish well and put in a thick layer of the crumbs; pare and slice ten or twelve apples, and put a layer of them and sugar; then crumbs alternately, until the dish is full; put a bit of butter on the top, and bake it in a slow oven.

Lemon Pudding.—Take four fine lemons, and boil them in water until quite soft, keeping them closely covered the whole time, take out the pips, and pound the lemons to a paste; then add half a pound of loaf sugar, finely powdered, half a pound of fresh butter beaten to a cream, and the yolks of six eggs well beaten; mix these well together, and bake it in a tin lined with puff paste; before serving, turn it out, and cover the top with sifted lump sugar.

Orange Pudding.—Mix well together the yolks of nine and the whites of five eggs, six tablespoonfuls of orange marmalade, half a pound of powdered lump sugar, and the same weight of melted butter; six tablespoonsfuls of grated bread, and half a pint of cream; bake in a dish lined and edged with puff paste. Add a little ratafia or brandy when put into the dish.

Marrow Pudding.—Take the crumb of a French roll, and pour over it three pints of boiling milk; cover closely for an hour; then add to it a pound of beef marrow cut into small bits, half a pound of raisins stoned, the same quantity of currants, well washed and dried, twelve eggs well beaten, and a little salt, grated nutmeg and lemon peel; mix well all these ingredients with the bread and milk, sweeten with brown sugar, and bake for half an

hour in a slow oven. The dish may be lined or not with puff paste, as approved. A small glass of liqueur or brandy may be added when the pudding is well mixed. Instead of bread many persons use stale cake; and they also substitute candied peel for the raisins.

Rhubarb Pudding.—Take some fine sticks of rhubarb; peel and cut small sufficient to weigh about a pound or a pound and a quarter, which put into a clean saucepan with eight or ten ounces of sugar, the rind of one lemon, grated, the juice, and half a teaspoonful of powdered cinnamon. Place the whole on the fire, and stir it occasionally at first, but constantly at last, until reduced to a sort of marmalade: take it from the fire, and pass through a hair sieve into a basin, mix with it about an ounce or two of fresh butter, or cream. Line a pie dish with puff paste; let it be thin at the bottom, but thick on the edge. When the preparation is cold, fill the dish with the rhubarb, and bake in a moderate oven until the paste is sufficiently done.

Muffin Pudding.—Cut into very thin slices six stale muffins, lay them in a deep dish, and pour over them half a pint of brandy; soak. Simmer half a pint of cream (or good milk), with a stick of cinnamon, the grated peel of a large lemon, and four ounces of lump sugar, for ten minutes; then take it off and keep stirring until cold. Mix it by degrees with the yolks of eight eggs, well beaten. Butter a plain mould, and line it with the muffins, the crusty sides outwards. Fill up the mould with alternate layers of dried cherries or other fruit, and the crumb of the muffin. Flavour the custard with orange-flower water, vanilla, lemon, or any other favourite essence, and pour it into the mould. Keep the mould upright by setting it in bran until the custard has soaked in. Bake half an hour in a moderate oven and serve hot.

Almond Pudding.—Reduce to powder, or paste, six ounces of sweet almonds; take six ounces of powdered white sugar, a teaspoonful of lemon-peel grated, a few drops of essence of lemon, and eight eggs, omitting two of the whites. Beat up the eggs well, and then mix in the other ingredients, beating the whole *for a full hour*, and always one way; when the oven is ready, oil the dish with salad oil, and set the pudding into the oven the minute it is made. This pudding *must* be beaten for fully the time specified.

Bread and Butter Pudding.—Lay into the bottom of a mould, or pie-dish, well buttered, some thin slices of a French roll, buttered, (many persons prefer stale bread), strew over them a layer of well washed currants, and so on alternately, until the shape is half filled; then add half a pint of currant wine, or, if not at hand, brandy or rum; let this stand for about an hour, and then pour over it a quart of good milk, in which six eggs have been beaten, a little grated nutmeg, and sugar: boil or bake in a very slow oven two hours, (or until quite done), and serve with wine sauce (*see* Receipt).

Tapioca Pudding.—Soak three tablespoonfuls of tapioca for an hour in warm water; then strain, and mix it with the yolks of six, and the whites of three eggs, well beaten, three pints of good milk, a little grated nutmeg, lemon peel, and a glass of sherry; sweeten to taste; bake in a buttered pie dish lined with puff-paste (*see* Receipt).

Sago Pudding.—Take two heaped tablespoonfuls of well-washed sago, and boil it in a pint of milk (water will do), with a little grated lemon peel, and cinnamon; when rather thick, add as much sherry and sugar as necessary; then beat the yolks of five, and the whites of two eggs, and mix together; pour the whole into a pie dish lined with puff paste, and bake about forty minutes.

Arrowroot Pudding.—Mix to a smooth paste a heaped tablespoonful of arrowroot in a little milk. Then boil a quart of milk, pour it over the arrowroot, and let it get cool, when add the yolks of three eggs, well beaten, three ounces of powdered loaf sugar, and two ounces of butter, broken into small bits; flavour with a

little nutmeg or cinnamon. When well mixed, turn into a buttered dish lined with puff paste, and bake for about a quarter of an hour.

Soufflé Rice Pudding. — Take two ounces of rice, washed and dried; put into a stewpan with nearly a pint of milk, an ounce of butter, half the rind of a lemon, free from pith, a little salt, and a spoonful of powdered sugar; set upon the fire until boiling, when draw it away and let simmer very gently until the rice is quite tender, when take it from the fire, and beat well with a wooden spoon until forming a smooth paste; add the yolks of four eggs, mixed well; pour the whites of the eggs into a bowl, whisk them until very stiff, and mix with the preparation: have ready, buttered lightly, a deep pie dish, pour in the mixture, and about a quarter of an hour before ready to serve, place it in a moderate oven, serving the moment you take it from the oven. Soufflé of ground rice is made the same as the above, the rice, however, not requiring so long to simmer as when whole. As also are soufflés of tapioca, semolina, vermicelli, &c., changing their flavours according to taste, using vanilla, lemon, orange, orange-flower water, or a small quantity of any description of liqueur. A few currants, or any sort of light preserve or jam, may also be mixed with any of the preparations, or laid at the bottom of the dish, which greatly improves the appearance and flavour of the pudding.

Boiled Rice Pudding.—Take half a pound of well-cleaned rice and boil it till tender in water, then put into a basin, and stir into it four ounces of butter, four ounces of sugar, some nutmeg and lemon peel grated, work the whole well together, adding a pound of well washed and cleaned currants; when the whole is thoroughly mixed, put it into a pudding cloth, and boil for two hours; serve with wine sauce (*see* Receipt).

Ground Rice Pudding.—Take a quarter of a pound of ground rice and mix it in a pint of boiling milk, let it boil up for several minutes, stirring continually, then add a quarter of a pound of butter, when nearly cold sweeten it to taste, add the yolks of six and the whites of three eggs, well beaten, a little orange-flower water, or other flavouring, a little grated nutmeg, and a small glass of brandy, or liqueur; bake in a Dutch oven, or brown with a salamander.

Baked Rice Pudding.—Take a quarter of a pound of well washed rice, and let it simmer over a slow fire in a quart of milk, with a stick of cinnamon, or a few bitter almonds, till the milk begins to thicken; then take it off, and when a little cool stir in a good sized piece of butter, a quarter of a pound of good brown sugar: the yolks of four eggs, well beaten, should be poured over the top, when all the other ingredients are well mixed; grate a little nutmeg over the top, and bake for twenty minutes in a slow oven.

Plain Baked Rice Pudding.—Wash a quarter of a pound of rice thoroughly and let it swell in a quart of hot milk; then add two or three eggs well beaten, sugar to taste, and a little nutmeg. Bake in a slow oven. *A very good rice pudding* may be made without the eggs, by simply placing rice and sugar in sufficient milk, and baking gradually in a slow oven. The rice will then swell and take up all the milk. Proportions—a quarter of a pound to a quart or three pints of milk.

Treacle Pudding.—Take one tea-cupful of molasses, about two ounces of minced suet, three tablespoonfuls of Indian meal. Scald the meal with boiling water or milk, mix it quite thin; when nearly cold, add four eggs well beaten. It requires three hours' boiling in a floured cloth.

Baked Indian Meal Pudding is made thus:—Boil a quart of milk, and while boiling, stir in seven spoonfuls of Indian meal, mix it quite thin; when it is moderately warm, add a tea-cupful of treacle, a little grated ginger and salt, four eggs, a lump of butter the size of an egg. Bake in a moderate oven till quite firm.

Rice and Fruit Pudding.—Take half a pound of well washed and dried rice, put it into a deep dish, just moisten it with milk and set it into a gentle

oven; add milk to it at intervals, in small quantities, until the grain is swollen to its full size, and is tender, but very dry; then mix with it two dessert-spoonfuls of powdered sugar, and five tablespoonfuls of rich cream. Fill a tart-dish almost to the brim with fruit properly sugared, heap the rice equally over it, leaving it rough, and bake it in a moderate oven for half an hour. If the fruit be of a kind to require a longer time it must be half stewed with the sugar put into the dish.

Fresh Fruit Puddings.—Use good crust, about half an inch thick, and well sweeten the fruit. Stone fruits, such as greengages, plums, damsons, peaches, nectarines, apricots, and even cherries, are improved by cutting in halves, taking the stones, and adding the kernels to the pudding. In any case, carefully wipe off the bloom, stalks, &c., and reject all the unsound fruit. Currants, raspberries, blackberries, gooseberries, &c., must be carefully picked, so that no stalks, mould, &c., go into the pudding. Sugar must be added to these pies according to taste, and the nature of the fruit. A little whipped cream, just flavoured with cinnamon, or vanilla, is an excellent addition. They must always be boiled in a basin—tied in a floured cloth—and put into boiling water. The time of boiling depends entirely upon the size of the pudding and the kind of fruit used.

Boiled Apple Pudding.—Line a buttered basin with a good crust, slice up sufficient apples (peeled and cored), to fill it, adding from time to time, sugar, an occasional clove and a shred of lemon peel. When full add nearly a wine-glassful of lemon juice (strained), and cover over with the crust; join up well that no water gets in, and tie up tight in a floured cloth —previously wrung out of boiling water. Put on in a large pan of boiling water, and boil fast and continuously for fully two hours. You may boil in a cloth without the basin, but it is not so good.

Another Mode is, to chop a pound of apples (peeled and cored), very fine, add them to half a pound of minced suet, half a pound of washed currants, half a pound of grated bread, and a few minced almonds. Add six ounces of moist sugar, and a little grated nutmeg, bind the whole with six yolks and four whites of eggs, mix thoroughly, add a glass of brandy, put into a buttered mould, tie over with a floured cloth, and boil for four hours.

Baked Apple Pudding.—Pare, core, and cut up small, a dozen large-sized apples, put them in a stewpan with just enough water to save them from burning; when stewed to a pulp, add three ounces of butter, melted, sugar to taste—say a quarter of a pound—and three eggs, well beaten. Beat the whole together for a few minutes; strew some fine bread-crumbs over the bottom of a well-buttered pie-dish, put in the apple; cover with more bread-crumbs; cut half an ounce of butter into little bits and put them about the top; bake in a moderate oven for thirty to thirty-five minutes. A little lemon-peel, or a clove or two, improves the flavour.

Fresh Fruit Pies.—Do not line the dish with paste, but put a strip round the edge of the dish to fasten the cover to. Always use good puff-paste (*see* Receipt). Invert a small cup in the centre of the pie-dish, and heap up the fruit (for remarks upon fruit *see* Fresh Fruit Puddings), use plenty of sugar, and, if liked, a little whipped cream, flavoured with vanilla or cinnamon. We are told that a large quantity of the free acid which exists in rhubarb, gooseberries, currants, and other fruits, may be judiciously corrected by the use of a small quantity of carbonate of soda, without in the least affecting their flavour, so long as too much soda is not added. To an ordinary-sized pie or pudding as much soda may be added as will cover a shilling, or even twice such a quantity if the fruit is very sour. If this little hint is attended to, many a stomach-ache will be prevented, and sugar saved; because, when the acid is neutralized by the soda, it will not require so much sugar

to render the sour sweet. Some of the most favourite pies are red currant and raspberry, gooseberry and rhubarb, apple and rhubarb, currant and cherry, plum, greengage, and damson.

Rhubarb Pie.—Take some fine rhubarb, strip off the skins, and cut the sticks into inch pieces; fill a large dish with them, cover with sugar, and flavour with lemon-juice and peel, cinnamon or vanilla. Put this in the oven, and when considerably shrunk, put into a smaller dish, add more sugar and flavouring, if required, cover with a good crust and bake for about half an hour.

Apple Tart.—Take two dozen fine apples, peel, core, and slice them; put the slices into a dish with strips of lemon-peel, a few cloves, and a little grated nutmeg or cinnamon; build the apples up in a dome to the centre of your dish, and cover over with fully half a pound of powdered sugar, make a band of paste half an inch in thickness, lay it round the rim of the dish; roll out the cover (puff-paste) to the thickness of a quarter of an inch, cover over, egg the top over, and place in a moderate oven to bake, which will take about an hour; just before taking from the oven, sift a little white sugar over.

Pumpkin Pie.—Cut into small thin slices, and fill a pie-dish with, a ripe pumpkin (previously skinned, halved, and the seeds and fluffy part removed); add a salt-spoonful of ground pimento, and a table-spoonful of sugar with a small quantity of water. Cover with paste, and bake in the ordinary way. It is much enriched when eaten by adding clotted cream and sugar. An equal quantity of apples with the pumpkin improves it.

Crust for Puddings and Pies.

Puff-Paste.—There are various receipts for puff-paste, but Soyer's is the best. "Put one pound of flour upon your pastry slab, make a hole in the centre, in which put the yolk of one egg and the juice of a lemon, with a pinch of salt, mix it with cold water (iced in summer, if convenient) into a softish flexible paste; with the right hand dry it off with a little flour until you have cleared the paste from the slab, but do not work it more than you can possibly help, let remain two minutes upon the slab; then have a pound of fresh butter from which you have squeezed all the buttermilk in a cloth, bringing it to the same consistency as the paste, upon which place it; press it out with the hand, then fold the paste in three so as to hide the butter, and roll it with the rolling-pin to the thickness of a quarter of an inch, thus making it about two feet in length; fold over one third, over which again pass the rolling-pin; then fold over the other third, thus forming a square, place it with the ends top and bottom before you, shaking a little flour both under and over, and repeat the rolls and turns twice again as before; flour a baking sheet, upon which lay it, upon ice or in some cool place (but in summer it would be almost impossible to make this paste well without ice) for half an hour, then roll twice more, turning it as before, place again upon the ice a quarter of an hour, give it two more rolls, making seven in all, and it is ready for use when required, rolling it to whatever thickness, according to what you intend making."

Half Puff-Paste.—This is excellent for all fruit tarts. Eight or ten ounces of butter must be allowed to every pound of flour; egg and lemon-juice as above. Three or four times rolling will suffice. It must stand in a cool place for twenty minutes before using.

Suet Puff-Paste is made exactly as with butter, preparing the suet thus: For every pound of flour take a pound of kidney beef suet; chop it very fine, and remove all skin, &c. Pound in a mortar—just moisten with butter or oil from time to time—until the whole sticks together, and is quite smooth and of the consistency of butter.

Short Paste.—Rub into a pound of flour, eight ounces of butter, and about a couple of ounces of finely-sifted sugar; take the yolks of two good large eggs and beat in about a gill of milk; mix these with the flour and

butter into a very smooth paste; roll this out two or three times, put in a cool place for a little while, and it is ready for use.

Common Paste.—Rub eight ounces of fresh butter well into twenty ounces of flour; make this into a smooth paste with water—say one third to half a pint—roll out twice or thrice and use. By adding to the flour two or three ounces of finely-powdered sugar (before the water, but after the butter), this paste is made very suitable for fruit tarts, &c.

Pudding Crust.—Chop *very* fine, six ounces of beef suet, and rub well into one pound of flour; add gradually sufficient water—say half a pint—to make this into a smooth paste, roll out twice, and use. Eight or even ten ounces of suet may be used for richer crusts.

Dripping Crust.—Clarify your dripping (beef is best) by boiling it over a slow fire for a few minutes, and skimming carefully; then take it up, let it cool a little, and then pass through muslin, and put away in jars in a cool place for use. Make into a smooth paste one pound of flour and half a pint of water; break six ounces of this clarified dripping into small pieces, and roll out the paste a few times, adding the dripping, by putting it on the crust, by degrees. The addition of two or three ounces of sugar makes this into a fairly good fruit-pie crust. Dripping from roast beef and mutton may be used for ordinary crusts without clarifying. Keep each sort of dripping in a separate jar. Marmalade pots do very well for this purpose; and when the dripping is quite cold and set, they may be covered over with paper till needed for use.

Pastry, Jellies, Creams, &c.

Vol-au-Vent.—This is, well done, the triumph of the pastry-cook's art. It must, however, be baked in a very hot oven, or it will not be strong enough to stand upright. The best plan, therefore, is to obtain the standing puff-crust hot from your pastry-cook. Anything may be put into a vol-au-vent—meat, poultry, game, fish, fruit, or preserve. With your paste-crust ready baked, you can fill it with whatever you please. Cover over, and serve either cold or hot; if the latter put the whole into a gentle oven and warm up.

Open Fruit Tarts.—Line the inside of a shallow tart-dish with puff-paste (*see* Receipt), ornament the edges, fill the middle with any kind of fresh or preserved fruit, jam, marmalade, or stewed fruits, or roll out very thin a little of the paste, and ornament the fruit with paste leaves, piping, &c.

Strawberry Tartlets.—Take a pint of fine fresh strawberries, remove the stalks, and pass them through a coarse sieve; add a quarter of a pound of powdered and sifted loaf sugar; whisk thoroughly eight fresh eggs, and mix with the sugar and fruit. Then line some patty-pans with fine puff-paste, and put in the centre of each a little of the fruit, leaving space all round for the paste to rise. Bake in a brisk oven for about ten minutes. Raspberries, blackberries, or red-ripe gooseberries may be treated in the same way.

Sausage Rolls.—Take delicate young pork in the proportion of two-thirds lean to one-third fat; chop very fine, and well season with pepper, salt, and spices, add a small quantity of sage, or basil, use water in chopping the meat, or a little soaked bread. Roll out puff-paste into square pieces (four or five inches), lay a roll of meat in the centre, lengthways; fold them in two; join the edges; and wash with egg. Bake in a brisk oven. Sausage rolls may also be made in the same manner, with ordinary Epping sausages—*not* beef, which are insipid when thus served.

Cheese-Cakes.—What are called "Norfolk" cheese-cakes are made thus:—Pass through a fine sieve twelve ounces of cheese curd, and mix into a perfectly smooth paste with six ounces of fresh butter; add two ounces of almonds (a few bitter ones), four ounces of sifted sugar, four eggs (well-beaten), leaving out two of the whites, three table-spoonfuls of cream,

two of brandy, a little mace or nutmeg, and if candied peel and currants are liked, two ounces of the former and three of the latter. Bake in patty-pans, lined with puff-paste, for twenty minutes. Be careful to leave a margin of paste all round the mixture.

Cheese-Cakes (another way). Take a pound and a half of powdered loaf sugar; add the yolks of nine, and the whites of six, eggs, well beaten, the juice of four lemons, the rind of two grated, and half a pound of fresh butter; put all these ingredients into a saucepan, stirring gently over a slow fire, until of the consistence of honey; pour it into small jars, and when cold it is fit for use. A little sliced citron peel is an improvement. Line your patty-pans with puff-paste, put a little of this mixture in the middle of each, and bake in a hot oven.

Lemon Cheese-Cakes.—Pound in a mortar eight ounces of sweet almonds previously blanched; add to them the grated rind of two lemons, half a pound of broken lump sugar, the same weight of melted butter when nearly cold, and the yolks of eight and the whites of four eggs well beaten; mix all the ingredients well together, and put into patty-pans lined with puff-paste. Bake in a moderately hot oven.

Orange Cheese-Cakes.—Substitute orange-peel for lemon-peel; proceed as for lemon cheese-cakes.

Almond Cheese-Cakes.—Blanch and pound in a mortar a pound and a half of sweet and twenty bitter almonds, add the yolks of twelve and the whites of six eggs, well beaten, a pound and a quarter of loaf sugar, in powder, a pound and a half of melted butter nearly cold, a nutmeg, grated, and the peel of two lemons, grated, two wine-glassfuls of orange-flower water, and a little brandy. Of course less may be made, preserving the proportions. Mix well together and bake as before.

Puffs.—Roll out rather thin some fine puff-paste (*see* Receipt), and cut it into round pieces; put in the centre of each some raspberry, strawberry, gooseberry, apricot, greengage, plum, damson, or any other jam, orange or lemon marmalade, or fresh fruit prepared as for tartlets (which *see*), fold up the sides so as to form a three-cornered puff; turn it over, notch the edges with a knife, and ice them—by first washing over with the white of an egg that has been whisked to a froth; then dust well with finely-powdered loaf sugar, and with a brush just sprinkle with clean water, to moisten the sugar. Bake in a brisk oven for twelve or fifteen minutes.

Mince-Pies.—Line your patty-pans with puff-paste (*see* Receipt), put a little mince meat (*see* Receipt), into the centre of each, cover with paste and bake in a very hot oven for a few minutes. A little more brandy or sherry should be added when the pies are made.

Apple Fritters.—Cut the apples (peeled) into rather thick slices, breadthwise, and cut out the core; put the slices into a batter made of the whites of two eggs, well whisked, six ounces of flour, a bit of butter, and sufficient milk to make it rather thin; when this is quite smooth, add a small pinch of salt. Fry in boiling dripping or lard; as they are done drain them in front of the fire on blotting paper, or a sieve; serve very hot, with powdered loaf sugar. If the sliced apples are soaked for some hours in a little sherry, sugar, and lemon juice the taste and aroma are greatly enhanced.

Pine-Apple Fritters are made in precisely the same way.

Currant Fritters.—Take a tumbler of new milk, make a smooth batter with two table-spoonfuls of flour; put to the batter four eggs, well beaten, three heaped table-spoonfuls of *boiled* rice, sugar and nutmeg to taste, and about two or three table-spoonfuls of fine grocers' currants, well washed, dried, and picked; mix well together, and this should be a firm, smooth batter. Divide this quantity into about eight or ten fritters; fry for about ten minutes, or less, in boiling lard or dripping; drain and serve as for apple fritters. Arrowroot, tapi

oca, or sago may be used in place of the rice for variety.

Apricot Fritters.—It is better that the fruit should not be too ripe. Cut in two as many apricots as you may require, and having taken out the stones, let them soak for an hour in sherry or brandy, with a little sugar and the juice of a lemon; drain them, dip them in batter, as for apple fritters (which *see*), and fry to a good colour. Before serving, powder them well with white sugar. *All stone fruit fritters are made by this receipt.*

Cream Fritters.—Take a handful of flour, the yolks of eight, and the whites of three eggs, well beaten, four macaroons, bruised, a little candied lemon or citron peel, cut very fine, half a pint of good cream, the same quantity of milk, and a large lump of sugar; let the whole boil over a slow fire for a quarter of an hour, until the cream has become of the consistence of thick paste; cool it on a floured dish, dredging flour over; when the paste is quite cool, cut it into small pieces, roll them in your hands to a round form, and fry of a good colour; when served, powder with fine sugar.

Almond Fritters.—Take a pound of sweet almonds, blanch them; pour over them four table-spoonfuls of orange-flower water, and in a short time after a pint and a half of cream; let them stand for two hours and a half, and then pound them to a paste; add the yolks of nine eggs, well beaten, a few Naples biscuits, pounded sugar, to taste, and mix well together; fry in butter to a good colour; serve with powdered sugar over the top.

Calf's Foot Jelly.—Take a calf's foot, cut it up small, and put in a stewpan with three pints of cold water; directly it boils up, move to the side of the fire; simmer these gently for fully five hours, keeping it well skimmed; pass this through a fine hair sieve, put in a cold place, and when quite firm, carefully take off anything there may be on the surface. Have ready a delicately clean stewpan, put in it two table-spoonfuls of cold water, the same quantity of pale sherry, the peel of a lemon, cut very thin, the juice of two lemons, the whites and broken shells of two large or three small eggs, and eight ounces of powdered loaf sugar; beat these well together until the sugar is quite dissolved, when add the jelly; whisk this over the fire until it boils, then pass it twice or thrice through a jelly bag, and put aside for use.

Isinglass Jelly.—Put a quart of cold water into a pan, add an ounce and a half of either isinglass or gelatine, and boil until reduced to one pint; pass through a bag as above, sweeten, flavour, and colour according to taste.

Many Jellies are made from one or other of these stocks. For liqueur or punch jelly a wine-glass to the pint will be found flavour enough. Any kind of fruit jelly may be made by pouring a little jelly into a mould and letting it set, then putting a layer of strawberries, slices of peach, nectarine, &c., then more jelly, allow that to set, then more fruit, and so on till the mould is full. A mere flavouring—such as lemon, vanilla, orange-flower water, &c., is sufficient to make either of these plain jellies very tasty and pretty. A few drops of prepared liquid cochineal is nearly all that is required for colouring. (For other jellies *see* "Sick Room Cookery.")

Apple Jelly.—This jelly is beautifully clear, firm, and delicious. Use ripe and juicy apples cut into quarters, put in a preserving-pan and cover with water, let them simmer till they become a pulp, strain through a thick flannel bag all night, for each pint of juice add one pound of loaf sugar with essence of lemon to flavour; boil for twenty minutes, put into pots and cover down tightly. Should the jelly not be firm when cold, reboil.

Tapioca Jelly.—Wash well four table-spoonfuls of tapioca, put it in sufficient cold water to cover it, and let it soak for four or five hours. Set a pint of cold water on the fire—when it boils, mash and stir up the tapioca that is in water, and mix it with the boiling water Let the whole simmer gently, with a stick of cinnamon or

mace. When thick and clear, mix a couple of table-spoonfuls of white sugar, with half a table-spoonful of lemon-juice, and half a glass of pale sherry, stir it into the jelly; if not sweet enough, add more sugar, and turn the jelly into your mould; put aside to set; serve with a border of marmalade or jam.

Orange Jelly.—Take a dozen fine oranges, and two or three lemons; peel eight oranges very finely, put the rinds into a basin, clarify a pound of loaf sugar, pass through a napkin into the basin (over the rind) while hot, and cover closely; cut the oranges and lemons in halves, squeeze out all the juice through a hair sieve into another basin, and proceed to clarify it as follows: wash well two sheets of white blotting-paper in a basin of water, let well drain upon a sieve, bruise them in a mortar until forming quite a purée, take from the mortar and put into the basin with the juice, which mix well with it; let it remain a quarter of an hour to settle, then pour it into your jelly-bag, pouring what runs through back again into the bag until it becomes as clear as spring water, strain the syrup again through a napkin, add the clarified juice, two ounces of dissolved isinglass, and a few drops of prepared liquid cochineal, to give an orange tint; mix all well together, and pour into a mould; when set and ready to serve, turn out by just dipping the mould in warm water; wiping quickly with a cloth, shaking the mould gently, turning over on a dish, and drawing the mould off quite straight.

Lemon Jelly.—Proceed precisely as directed for the orange jelly, using all lemon juice instead of orange, rather more syrup, and omitting the cochineal. A glass of very pale sherry or hock improves this jelly.

Red or Black Currant Jelly.—Select fine ripe fruit and take away the stalks, &c. Put them in an earthenware jar, which put in a pan of boiling water, and in about forty or fifty minutes the juice will have been extracted, then strain them through a jelly-bag; when cold add a pound of powdered loaf sugar to every pint of juice, mix well; then boil for about thirty minutes, skimming carefully. Put into pots for use, covering down quite air-tight. The fruit, if boiled a little more, with some sugar, makes a tolerable jam.

Blancmange.—Take half an ounce of good isinglass and dissolve in a pint of new milk; strain through muslin; put it again on the fire, with the rind of half a lemon, pared very thin, and two ounces of loaf sugar, broken small; let it simmer gently until well-flavoured, then take out the lemon peel, and stir the milk to the beaten yolks of three fresh eggs; pour the mixture back into the pan, and hold it over the fire, keeping it stirred until it begins to thicken; put it into a deep basin, and keep it moved with a spoon, until nearly cold; then pour it into the mould, which should have been laid in water.

Tapioca Blancmange. — Soak for about an hour in a pint of milk, eight ounces of tapioca; then boil until very tender, sweeten to taste with powdered loaf sugar, and pour into a mould. This looks best if served with a little jam, or preserve, topped with whipped cream round it, and eaten with it; if flavoured with vanilla, noyeau, lemon, &c., garnishing is unnecessary.

Other Blancmanges only differ in flavour and sweetness, the regular proportion being half an ounce of isinglass and two ounces of powdered loaf sugar to every pint of milk. Proceed as for lemon blancmange, adding any flavouring preferred. *Calf's foot jelly blancmange* is made in the proportion of six yolks to a pint of jelly. Beat the yolks well and add them to the jelly while warm: put the mixture on the fire, and beat well till on the point of boiling, then let it cool gradually, stirring all the time; when nearly cold fill the mould. Flavour to taste. The various corn-flours make tolerable blancmanges.

Damson Cheese. — Take fine ripe fruit, and boil it in water, enough to cover it; strain through a very coarse sieve; and to each pound of pulp add a quarter of a pound (or more, accord-

ing to taste) of powdered loaf sugar; boil until it begins to candy at the sides, when pour it into your moulds. Many sorts of fruit—especially plums, greengages, peaches, nectarines, and cherries—may be treated in the same manner. Apples require to be flavoured with lemon juice, and a little noyeau.

Almond Rocher. — This delightful sweetmeat is made thus :—Blanch and dry seven ounces of sweet and one ounce of bitter almonds ; chop them very fine, with four ounces of candied lemon and orange peel, and three of citron; then add two ounces of flour, three quarters of a pound of sugar, a small teaspoonful of mace and cinnamon mixed, and the whites of three large eggs, well beaten; mix well; roll into balls of the size of large marbles and bake on wafer-paper twenty minutes in a moderate oven; they should be quite crisp, but not too deeply coloured.

Black-cap Apples.—Peel, divide and core several large apples, cover with powdered loaf sugar, and bake. Mix a wineglass full of sherry, the same of water, one clove, a little grated lemon peel, and sugar to taste. Boil gently, and strain over the apples when in the dish. Black the tops of each with a salamander or a hot shovel.

Cup Custards.—Put into a delicately clean saucepan a quart of new milk, with a small stick of cinnamon, the rind of a lemon, cut very thin, a few bitter almonds, or laurel leaves, and sugar to taste,—of course these flavourings are only matters of taste; beat the yolks of eight eggs with the whites of four, add a little milk, and strain. When the quart of milk boils, take it off the fire, and strain it ; then stir the beaten eggs into it. Return the whole to the saucepan, and set on the fire again, stirring constantly. Let it just come to the boiling point; then take off the fire, pour into a large jug and continue stirring till nearly cold. It should now be quite smooth and have the consistency of thick cream, and is ready for being poured into custard glasses. When the glasses are filled, grate a little nutmeg over them. *Another Method* is to put into your saucepan sufficient new milk to fill a dozen of your custard glasses; set upon the fire until boiling, when add a quarter of a pound of powdered loaf sugar, and the rind of two lemons, free from pith; place the lid upon the stewpan, take from the fire, and let it stand ten minutes; have ready the yolks of eight eggs, well beaten; stir in the milk by degrees, pass through a strainer, and fill the cups; have ready upon the fire a large flat stewpan, containing water sufficient to cover the bottom two inches in depth, and just simmering, stand in the cups, and let remain gently simmering until the custards are quite firm, when take them out, let them remain until cold, when wash the cups outside, and serve. Any kind of flavour may be introduced into the above. *Coffee Custards* are made thus: —Mix together half a pint of strong coffee, made as usual, add half a pint of thin cream or milk previously boiled, sweeten to palate, mix with the yolks of eggs, pass through a strainer, and proceed precisely as directed in the last receipt.

Stone Cream.—Take an ornamental dish, and put into it a few macaroons, two or three tablespoonfuls of lemon-juice, a little lemon peel, grated, and some jam—apricot, greengage, plum, or apple. Boil together a pint of cream, half an ounce of isinglass and some sugar; when nearly cold pour it on the jam, &c. This should be made a few hours before using, to allow the flavour of the jam and lemon juice to permeate the biscuits and cream.

Dessert Cream.—Boil a quart of new milk, with grated nutmeg or cinnamon, two or three peach leaves, or a few bruised bitter almonds, and a sufficient quantity of sugar to sweeten it, then straining the cream, and when cold beating up with it the yolks of four eggs, and warming the whole over the fire until it thickens. This is eaten cold with fruit tarts, or with any fresh fruits at dessert. If half a pint of rich cream be used instead of the whole being of milk, it will be improved.

Crême "au Liqueur," or "aux Fruits."—Take a pint of fresh cream, sugar to taste — say six ounces; a

heaped teaspoonful of powdered gum arabic, (dissolved in a little orange-flower water); a wine-glass of any liqueur, or the same quantity of fresh fruit juice; whip the whole into a froth, and serve. *Cream is whipped* with a whisk, and as the froth rises it is removed on to a clean sieve, and allowed to drain, and so on till all is firm froth. Serve either piled on a dish or in glasses. These creams should, if possible, be frozen to prevent the froth from falling.

Italian Cream. — Take a pint of cream, sweeten to taste, boil it with the rind of a lemon, cut very thin, and a small stick of cinnamon; strain and mix with it a little dissolved isinglass; while hot, add to it the yolks of eight eggs well beaten, and stir it till quite cold.

Lemon Cream.—Sweeten a pint of cream with sugar rubbed over the rind of two lemons, and as much more sugar, pounded, as may be necessary; then adding juice of two lemons and the grated peel (very fine); whisk well, and serve the froth upon sponge biscuits dipped in wine.

Raspberry Cream.—Take one quart of cream, and six ounces of raspberry jam; mix well, and rub through a very fine sieve (lawn is best), add the strained juice of a lemon, and powdered loaf sugar to taste; whisk to a stiff froth, and serve heaped on a dish, in a shape or in glasses. *Strawberry, Gooseberry, and many other jams* may be used instead of the raspberry.

Solid Cream.—Take a pint of cream, and mix with it two ounces of pounded loaf sugar, the juice of a lemon, and a glass of any liqueur, brandy, or rum; work them well together by pouring for some time from one jug to another. Serve in glasses.

Solid Fruit Creams.—Boil apples, apricots, peaches, or plums in a very light syrup of sugar and water,—after coring and peeling, or stoning—until they are sufficiently soft to press the pulp through a sieve; then sweeten, and beat up with the whites of eggs which have been well whisked, and serve on a dish with cream round.

Coloured Creams.—If it is required to give colour to any of these creams, put the carmine, annatto, or whatever colour it may be in a bag, and putting it into boiling water, squeeze out the colour in the same way as with a blue bag; filter the liquid, and add it to the cream before whisking, until the desired tint is obtained. All creams to be eaten cold are much improved by being frozen. An immense variety of colours and flavours are given in many of the cookery books, but the receipts given above will be found amply sufficient for all purposes.

Trifle.—A very excellent trifle may be made thus:—Take two ounces of blanched sweet almonds, and one ounce of blanched bitter almonds; pound them to a smooth paste, adding a little rose water; take two lemons, grate the peels, and squeeze the juice into a saucer; break small and mix with the almonds, four small sponge cakes, or Naples biscuits, and eight or more macaroons. Lay the mixture at the bottom of a glass bowl; grate a nutmeg over this, and throw in the grated peel and strained juice of the lemons; to the whole add half a pint of sherry mixed with a gill of brandy and half a gill of rum, and let the mixture remain until the cakes are dissolved, when it may be stirred a little: to a quart of cream, add a quarter of a pound of powdered loaf sugar, and a glass of noyeau, and beat with a whisk till it stands alone; as the froth rises, take it off with a spoon, and lay it on a sieve, with a large dish under it, to drain; then take the cream that has drained into the dish, and pour it back into the pan with the rest, beat over again, until it is all froth; this being done, set the cream in a cool place; have now a pint of rich baked custard, cold, and pour it into the bowl upon the dissolved cakes, and when the cream is cold, put that in also, heaping it high in the centre; a layer of fruit jelly, or preserved fruit, may be put in between the custard and the frothed cream. Spirits should always be used in trifle, as otherwise the cream may turn sour. Stale savoy cake in slices may be used for the bottom layer. A layer of any kind of

jelly or jam may be put between the cake at the bottom. If wanted in the evening a trifle should be made in the morning, and kept in as cold a place as possible.

Charlottes. — Line a plain round mould with any kind of fruit, or sweet biscuits, or both, and fill up with *crême aux fruits* (*see* Receipt), if biscuits are used, or *crême au liqueur* (*see* Receipt); freeze, and serve.

Cakes.

In all cakes lightness is essential, so the eggs used should be thoroughly whisked, the sugar finely powdered and sifted, the flour, currants, raisins, &c., *quite* dry, the butter perfectly sweet and good, and beaten with the hand to a cream (beef suet beaten to a cream, or clarified dripping, may be used in the commoner cakes in place of butter), the oven hot but not fierce, and everything used in the making scrupulously and delicately clean. To ascertain if a cake be done, stick a clean knife into the middle, and when drawn out it should be quite bright; if any of the cake adheres to it, it is not done. If the top of a cake is scorching or burning, open the oven door for a few minutes, and put a sheet of writing paper over the top of the cake.

Pound Cake.—Take a pound of fresh butter, and beat it to a cream; work it well with a pound of powdered and sifted sugar, till smooth; beat up nine eggs, and add them gradually, continuing to beat twenty minutes; mix in lightly one pound of flour, put the whole into a hoop covered with paper, on a plate, and bake it an hour in a moderate oven. Currants, plums, candied peel, or caraway-seeds may be added at will.

Savoy Cake.—Take twelve fine eggs, their weight in sifted sugar, and half their weight in flour; break the eggs, keeping the whites and yolks separate; add the yolks to the sugar with a little rasped lemon-peel, and beat them up well together; whip the whites of the eggs, add them to the flour, and then gradually mix the whole together, stirring well with the whisk as you mix; when thoroughly mixed, have ready a cake shape, butter it well, put in the ingredients, and bake in a moderately hot oven for an hour and a half; when done, turn it out gently on a dish. It should be of a fine gold colour. This cake may be iced (*see* Icing).

Common Lunch Cake. — Take a pound and a half of butter, beat it to a cream; and mix it with three quarterns of dough; add a pound of good brown sugar, the same quantity of well cleaned currants, a little nutmeg, and, if liked, a few caraway seeds; beat all well together, and bake in a buttered tin for an hour.

Ordinary Plum Cake. — Procure from the baker's half a quartern of dough, spread it with the hand on a pie-board; cover it with half a pound of butter dotted about, strew over it half a pound of moist sugar, half a pound of currants, well washed and dried, half a pound or a pound of stoned raisins, a few cloves, a little mace, and half a nutmeg, grated; roll the whole together, and put it into a pan; then beat three eggs in a cup of lukewarm milk, and pour to the other ingredients, beating the whole together with the hand for about three quarters of an hour; put it into a buttered pan, and bake in a moderate oven for an hour; when done, turn it out. It should not be cut for three or four hours after. This is a very good *school cake.*

Ordinary Seed Cake.—Take half a quartern of baker's dough (milk-dough is better); cover it with half a pound of butter dotted about, strew over half a pound of moist sugar, three quarters of an ounce of caraway seeds; mix into a dough; then add three beaten eggs, a few pounded almonds or a glass of noyeau, and enough warm milk to make it into a moderately stiff paste; line a hoop with buttered paper, put in the cake, sprinkle over a few bits of citron peel, or a dozen caraway comfits, and bake in a hot oven for about an hour.

Soda Cake.—Rub four ounces of butter into a pound of flour, add half a pound of currants and half a pound of

sugar. Dissolve a teaspoonful of carbonate of soda in a teacupful of warm milk, beat up three eggs, mix with the milk and soda; and then mix the whole thoroughly together; put into a cake tin or mould, and bake in a moderate oven for about an hour and a half.

Respecting the use of carbonate of soda in cakes or pastry, it certainly gives great lightness to them, but it must be used cautiously, as it has an injurious effect upon many persons, if taken in large quantities.

Currant Cake.—A very fine rich cake is made thus:—Take four pounds of fresh butter, and beat it with the hand to a cream; then add four pounds of good moist sugar and the yolks and whites of thirty eggs (beaten separately and afterwards together); when these are thoroughly mixed add by degrees four pounds of well dried flour, five pounds of currants, washed, dried, and picked (if preferred, take four pounds of currants and one pound of stoned raisins); two nutmegs, grated; a pound and a half of candied citron and lemon peel, and half a pound of ground almonds (if not procurable pound the whole almonds in rose-water); mix thoroughly for an hour, add a glass of brandy and another of liqueur, and put it into a buttered cake tin, lined with buttered paper; bake in a moderate oven for about four hours, and cool gradually.

Icing.—This cake is well worth icing, which is done thus:—Procure a pound and a half of confectioner's icing sugar—or, if not procurable, pound, and sift *very* finely, that weight of best loaf sugar—add very gradually the well beaten whites of eight eggs (these should be a stiff froth); then mix in the juice of a lemon; beat this very light, white and smooth; put the cake—already baked and still hot—in front of the fire, and put the icing on with a spoon, smooth, and let it set gradually.

Bride Cakes, Twelfth Cakes, Christening Cakes, and others which require much ornamentation, had better be bought of a good pastry-cook. This is the cheapest and most satisfactory way. Bride cakes and twelfth cakes, indeed, are simply rich currant cakes iced, sugared and ornamented.

Rice Cake.—Whisk up well six eggs, and add their weight in sugar and butter; and half their weight in ground rice, and also in wheaten flour. Any flavouring may be added. Citron peel is a great improvement. For mode of making *see* Madeira Cake. Bake for an hour to an hour and a quarter in a moderate oven.

Madeira Cake.—Take four or five eggs, and whisk them well for fifteen minutes, then, still whisking, add—first, six ounces of dry, pounded, and sifted sugar; then six of flour, also dried and sifted; then four ounces of butter just dissolved, but not heated; the rind of a fresh lemon (grated very fine); and the instant before the cake is moulded, beat well in the third of a teaspoonful of carbonate of soda; bake in a ring for an hour in a moderate oven. In this, as in all compositions of the same nature, observe particularly that the butter must be added gradually, and each portion be beaten into the mixture until no appearance of it remains before the next is added: and if this be done, and the preparation be kept light by constant and light whisking, the cake will be as good as if the butter were creamed—that is, reduced by the hand to the consistency of thick cream; this is hard work, but it well repays for the trouble by the great lightness of the cake. Candied citron peel should be added to this cake.

Sponge Cake.—Break separately six fine eggs, separate the whites from the yolks; beat the yolks for ten minutes, then add to them gradually twelve ounces of very finely powdered loaf sugar (confectioner's *icing* sugar is the best); mix well together. Meanwhile whisk the whites to *a solid froth,* add this to the yolks and sugar, and when these are all well blended stir in about eight ounces of sifted flour. Mix well, amd flavour with the finely-grated rind of a lemon. This cake baked in one mould will take an hour in a moderate oven:

sprinkle currants or sliced candied peel on the bottom of the mould. If baked in small tins put in a quick oven, and bake to a light colour.

Wine Cakes. — Beat a pound of butter to a cream, and mix it with a pound of well dried flour, and a pound of powdered loaf sugar; to these add half a pound of well cleaned currants, and a glass of liqueur or brandy; roll out the paste to the thickness of half an inch, cut into fancy shapes, and bake upon a floured tin.

Macaroons.—Pound or chop very finely six ounces of blanched almonds, and mix them with half a gill of water, and the whisked whites of three eggs. Add six ounces of sugar, and having made the whole into a paste, drop the cakes with a spoon on wafer paper laid on a tin, and a little sugar on them. They should be baked in a brisk oven, till well brown, when done, the wafer paper at the bottoms must be left on. For *Ratafias* add two ounces of *bitter* almonds; make them smaller, and remove the wafer-paper.

Gingerbread.—Mix three pounds of flour with half a pound of butter, four ounces of brown sugar, and half an ounce of pounded ginger. Make these into a paste, with one pound and a quarter of warm treacle.

Spice Gingerbread. — Take three pounds of flour, one pound of butter, one pound of moist sugar, four ounces of candied orange or lemon peel, cut small, one ounce of powdered ginger, two ounces of powdered allspice, half an ounce of powdered cinnamon, a handful of caraway seeds, and three pounds of treacle; rub the butter with your hand into the flour, then add the other ingredients, and mix it in the dough with the treacle; make into cakes or nuts, and bake it in a moderate oven. The top should be brushed over with white of egg.

Shortbread.—Beat half a pound of butter to a cream, and add to it by degrees one pound of flour; then mix with two ounces of powdered loaf sugar, a few chopped sweet almonds, and, if liked, a few caraway seeds. When this is quite smooth halve it, and roll out each cake to about two thirds of an inch thick; pinch up or in some other way ornament the edges; prick with a fork in several places, and decorate the tops with candied peel in slices, caraway comfits, or a piping of icing. Bake upon paper, in a hot oven for about twenty to twenty-five minutes.

Scotch Currant Bun.—Ingredients: one quartern of rolled dough, three and a half pounds of raisins, half a pound of candied orange peel, one pound of butter, two pounds of currants, half a pound of almonds, one ounce and a half of ground ginger, one ounce of allspice, a few caraway seeds. Stone raisins, blanch the almonds and cut in halves, clean the currants, cut orange peel into small pieces, mix spices and fruit well together. Knead one pound of butter into the dough, halve it and place one half in a basin, add the fruit gradually to it, until thoroughly mixed—mix a little flour with the other half of the dough, roll this out on a baking board, large enough to form the crust for the entire cake, top, sides, and bottom; butter the tin, and put cake in, prick top with fork, and bake for four or five hours.

A Plain Cheap Cake.—One quartern of rolled dough, half a pound of butter, three quarters of a pound of sugar, one pound of currants, small teaspoonful mixed spice; mix well together, butter the tin, and bake for two hours.

Plain Buns.—Take four pounds of flour, and mix with one pound of sifted moist sugar; make a hole in the middle, and stir in gradually half a pint of yeast, a pint of warm milk, with flour to make it as thick as cream; cover it, and let it stand two hours; then melt to an oil, but not hot, one pound of butter, stir this to the other ingredients, with warm milk enough to make a soft but dry dough, throw over it a little flour, and let the whole stand in a warm place until it rises very light. Take a baking dish rubbed over with butter, mould the dough into buns, each about the size of an egg, lay them in rows three or four inches apart, set them in a warm place to prove till they have swollen to double their size, bake them in a hot oven,

and brush them over with milk. Caraway seeds, currants, raisins, or finely chopped candied peel, may be added at will.

Bath Buns. — Take of flour two pounds; ale yeast, one pint; sherry, one glass; add a little orange-flower water, three beaten eggs, a little nutmeg, and salt, whatever currants, plums, chopped almonds, caraway seeds, or chopped candied-peel, you wish; and made the whole into a dry dough, with warm cream or milk. Let this stand before the fire for some time until it has risen well; then knead in a pound of fresh butter; mould the dough into buns, and set them to prove as before directed; sprinkle a few comfits on each, and brush over with beaten white of egg, dust over with powdered loaf sugar, sprinkle with a little water from a brush, and bake in a quick oven on floured paper.

Muffins.—Mix together for a quarter of an hour a quartern of flour, a pint and a half of warm milk and water, a quarter of a pint of yeast, two ounces of salt, then add a quarter of a peck more flour, make the whole into a dough; let it rise one hour, roll up, pull into pieces, make them into balls, put into a warm place, shape them into muffins, and bake on tins; turn them when half done, dip them into warm milk, and bake to a pale brown.

Indian Meal Muffins.—Take a quart of Indian corn meal, and pour into it by degrees sufficient boiling water to make it into a thick batter; when cooled a little, add a tablespoonful of yeast, two eggs well beaten, and a teaspoonful of salt; set in a warm place to rise for two hours; then butter square tin pans, two-thirds fill them, and bake in a quick oven; when done, serve hot or cut into squares; or bake as directed above (*see* Muffins).

Crumpets.—Mix a quart of new milk to a thin batter with water, flour, a little salt, an egg, and a tablespoonful of good yeast, beat well, cover it up, and let it stand in a warm place to rise. Clean the muffin plate, while warm over the fire, and rub it with a little butter tied up in a piece of muslin; pour a cupful of the batter on the plate in a thin ring; as it begins to bake, raise the edge all round with a sharp knife. When one side is done, which it is very speedily, turn and bake the other.

Tea Cakes—called "Sally Lunns:"—Take one pint of warm milk, or cream, with a teacupful of yeast, put these into a pan, with flour enough to form a *thick* batter; add the yolks of three eggs well beaten, two ounces of loaf sugar dissolved in some warm milk, and a quarter of a pound of butter. When risen (say from thirty to sixty minutes), make the dough into cakes, put them on tins, and bake them in a quick oven. In summer the milk should be lukewarm, in winter warmer.

Rusks.—Take seven fine eggs and beat them up, then mix with half a pint of new milk, in which four ounces of butter has been melted. Add a gill of yeast, and three ounces of sugar; put this gradually into flour to make a light batter; let it rise before the fire half an hour; then stiffen with more flour. Knead well, divide it into small loaves or cakes, and flatten them. These, baked well and eaten hot with butter, are capital tea-cakes; but to form rusks, allow them to get cold, slice them, and put into the oven to crisp.

There are many other varieties of cakes, but the above receipts will be found sufficient for family requirements. When a particularly rich or highly ornamented cake, with almond and sugar icings, sugar pipings and flowers, the best and cheapest way is to go to a good pastrycook, tell him exactly what you want, and leave the rest to him.

Biscuits.

Plain biscuits are very wholesome food, and enjoyable at almost any time. Now that so many very excellent machine-made biscuits are sold cheaply in tins, or by the pound, it is not necessary to give more than a few good receipts.

Sea-Biscuits will be found very useful to all travellers. Take five pounds of wheaten-flour, with the bran in it, half a pound of yeast, and just enough tepid water to make it into a very stiff dough: *this must be kneaded for a*

long time, with great force; then shaped into biscuits, pricked with a fork, and baked in a slow oven for about two hours; then set to dry in a warm place.

Captain's Biscuits are made in the same way, but with *fine* wheaten flour, and *Abernethy Biscuits* as Captains with the addition of caraway seeds and sugar.

Sweet Biscuits.—Make into a stiff paste with two eggs, *not beaten*, and tepid water, a pound of flour, half a pound of butter, and half a pound of pounded loaf sugar. Roll out the paste, and to form the biscuits, make into round balls, flatten them a little; prick with a fork; bake on tins. A few caraway seeds, may be added.

Savoy Biscuits.—Take twelve eggs, their weight in powdered sugar, and half their weight of fine flour; beat up the yolks with the sugar, adding a little grated lemon peel and orange-flower water; whip the whites separately into a stiff froth, mix with the other; then stir in the flour, and beat the whole well together; butter a mould, and put in your mixture; bake in a moderately warm oven.

Sauces and Stuffings.

The Use of Sauces has become more general of late, and several forms of these condiments are popular. Taken in moderation, they may be considered healthy, but used in excess they are decidedly injurious. The base of all the meat sauces is the Indian pickle *chutney, soy, garlic, sugar, pepper, and catsup*, in various proportions. The *Worcester* and *Harvey's* sauces, have so much in common that a description of the latter will be sufficient.

Harvey's Sauce.—The following are the ingredients for a gallon; though of course less may be made:—Five pints of best pickling vinegar; quarter of a pound of good pickled cucumber, cut small; quarter of a pound of white mustard seed, bruised; quarter of an ounce of fresh celery-seed, bruised; and one ounce of garlic, peeled, and cut small. Boil until reduced to four pints, in a stone jar. In another jar put four pints of water, one ounce of bruised ginger; quarter of an ounce of bruised mace; quarter of an ounce of cayenne pepper; one pint of India chutney or soy; boil slowly in a stone jar, till reduced to four pints; then mix the contents of the two jars together, stirring well; boil them together for half an hour, then let the mixture stand till cold. Take the peel of three lemons, cut into strips, dry in an oven till quite brown and dry. Add hot to the cold mixture. Cover close; let it stand ten days, and strain for use.

Sauce Robert.—Slice four or five onions, and brown them in a stewpan, with three ounces of butter, and a dessertspoonful of flour. When of a deep yellow, pour to them half a pint of beef or of veal gravy, and let them simmer for fifteen minutes; skim, add a seasoning of salt and pepper, and, at the moment of serving, mix in a dessertspoonful of made mustard.

Mango Chutney.—The following receipt is given by a native of India. To twenty ounces of moist sugar, in syrup, add twelve ounces of salt, four ounces of garlic, four ounces of onions, one ounce of powdered ginger, four ounces of dried chillies, twelve ounces of mustard seed, sixteen ounces of stoned raisins, three pints of white wine vinegar, and thirty unripe sour apples peeled, cored, and sliced small. Place the whole into a large pan, and stir till mixed. Boil gently, allow to get cold, and bottle for use.

Another Way. Ingredients:—six pounds of apples or rhubarb, three ounces of garlic, half a pound of brown sugar, three ounces of ground ginger, three quarters of a pound of raisins, three quarters of a pound of salt, one ounce cayenne pepper, two pints of vinegar. Apples must be stewed to a pulp, pick and beat the garlic as fine as possible, stone the raisins, and cut in small pieces—mix all thoroughly together, boil vinegar, and pour over all, put in a large jar, stir well, close at top and let it stand at side of the fire for three weeks, stir daily.

Fish Sauces.—The base of most fish sauces is *Melted Butter*, which is easily made by flouring the butter and adding milk, keeping the whole stirred,

one way, in a pipkin over a clear fire till it boils. Proportions :—A teaspoonful of flour to two ounces of butter, a half pint of milk and a pinch of salt. Melted butter may also be made with water instead of milk. Add the roes or milts of mackerel, and finely chopped parsley, and a spoonful of soy, and you have *Mackerel Sauce;*—the spawn of a lobster, and the flesh pulled into pieces with a fork, and with pepper and a spoonful of Worcester or Harvey, and you have *Lobster Sauce;*—the flesh and soft parts of crabs, and you have *Crab Sauce.* Half a dozen to a dozen fresh, bearded oysters, with half a spoonful of anchovy sauce, and you have *Oyster Sauce;*—a handful of shelled shrimps, and a teaspoonful of lemon pickle, and you have *Shrimp Sauce;*—a tablespoonful of anchovy paste, or a couple of pounded anchovies, and you have *Anchovy Sauce;*—the liquor of a quart of picked and bearded mussels —the mussels to be added afterwards, —and you have *Mussel Sauce;*—the pounded flesh of salmon, with a little sherry, a few button mushrooms and shallots, and a pinch of sugar, and you have *Matelote Sauce ;* — boiled and washed onions, strained, and you have *Onion Sauce.*

Parsley Sauce.—Add to melted butter some finely chopped parsley, previously scalded, giving it a boil up before serving. *Fennel Sauce* is made in the same way.

Egg Sauce for Salt Fish. Add four hard-boiled eggs, chopped fine, to half a pint of boiling melted butter, with a squeeze of lemon.

Tomato Sauce.—To four or five tomatos add an onion, two or three cloves, a little minced ham, and a mere pinch of thyme. When boiled, rub the whole through a sieve, add a little flour, season with pepper and salt, boil for a few minutes, and serve hot.

Béchamel Sauce. — Mince together shallots or small onions, parsley, and cloves, put them in a stewpan, with an ounce of butter, a little flour, cream, salt and pepper ; let the whole boil till it thickens, then add a little nutmeg, and serve. Minced meat may also be added.

Sharp Sauce for Cold Meats (*Sauce Piquante*). Into a quart of white wine vinegar, eight cloves of garlic, twelve shallots, a small clove of ginger, a little salt, and the peel of a lemon ; boil together, strain, and bottle for use.

Caper Sauce.—To melted butter add bruised or chopped capers, with a dash of lemon pickle. Heat—taking care that it does not boil.

Bread Sauce.—Boil crumb of white bread, with a minced onion, and some whole white pepper; when cooked, take out the onions, peppercorns, and put the bread, carefully crushed through a sieve, into a pipkin with cream, a little butter and salt, stirring carefully till it boils.

Apple Sauce.—Pare, core, and slice apples, boil them in water, with a bit of lemon peel until tender ; strain and roast; then add moist sugar and butter; heat and serve. Used with pork, geese, or ducks.

Brown Apple Sauce is made as the same, with gravy seasoned.

Mint Sauce.—Pick, wash, and chop fine some green spearmint. To two tablespoonfuls put eight of vinegar, adding brown sugar to taste ; serve cold in a sauce tureen, with lamb or mutton.

White Sauce.—In a pipkin with a quarter of a pound of butter add a dessertspoonful of flour, some salt and whole pepper ; add a little water, mix well together, stir one way, without allowing it to boil, and serve hot. This may also be made without the butter, by adding the yolk of an egg.

Brandy Sauce and *Wine Sauce* are made by adding brandy or wine and sugar to melted butter, without salt. Proportions :—Three teaspoonfuls of pounded sugar, a wine-glass of wine, or half that quantity of brandy, or curaçoa. Stir till nearly boiling and serve in a tureen. Some prefer to serve *Brandy Sauce* in the dish with the pudding.

Sweet Sauce for Puddings.—To half a pint of melted butter, add three teaspoonfuls of pounded white sugar, flavour with grated lemon rind, nutmeg, cinnamon, or bitter almonds ground; simmer and serve hot. Another.

Sweet Sauce is made by boiling a pint of milk and stirring into it two beaten eggs and four ounces of pounded sugar, in a jar placed in a saucepan of water, and stirred till it thickens, but not boils. Flavour with nutmeg or cinnamon and half a glass of brandy.

Mushroom and Walnut Sauce is made by putting a pint of mushrooms and a pint of walnut pickle into a bottle, with a little essence of anchovies, set uncorked in a saucepan of water and heat to boiling. Then allow to cool, and cork for use.

Celery Sauce for boiled turkeys and poultry generally. Boil until tender, in salt and water, four nice heads of celery, cut them into small pieces and put them into half a pint of melted butter, with a blade of pounded mace, white pepper and salt to taste. Simmer, and serve in a tureen. This quantity is enough for a fowl; half as much more for a turkey. It may also be made with stock instead of melted butter, thickened with a piece of butter rolled in flour.

Forcemeat for fish-soups, stews, &c. Beat the flesh and soft parts of a lobster, half an anchovy, a piece of boiled celery, the yolk of a hard egg, a little cayenne, mace, salt, and white pepper, with two tablespoonfuls of bread crumbs, one of oyster liquor, two ounces of butter warmed, and two eggs well beaten; make into balls, and fry brown in butter.

Veal Stuffing or Forcemeat.—Season with pepper, salt, cloves, grated nutmeg, and lemon peel, a pound of lean veal, and a quarter of a pound of sausage meat; add mushrooms, mincing the whole very fine together. For forcemeat balls, add yolks of eggs, and roll in flour.

Stuffing for Hare.—The liver scalded, an anchovy or a teaspoonful of anchovy paste, a slice of fat bacon, a little suet, parsley, thyme, knotted marjoram, a shallot or two, and either onion or chives, all chopped fine; crumbs of bread, pepper, and nutmeg, beat in a mortar with an egg well beaten.

Ordinary Stuffing for Meat or Poultry.—Mix with any potted meat or game an equal proportion of soaked bread or bread-crumbs, and you will have at once a very fine stuffing. Bacon or butter must be substituted for suet, when the forcemeat is to be eaten cold.

Sage and Onions.—This is the ordinary stuffing for goose or roast pork. Chop onions very fine, with half the quantity of green sage leaves, put into a stewpan with a little water, simmer gently for ten minutes, then add pepper and salt, with about twice the quantity of fine bread crumbs; mix the whole, and pour thereto a quarter of a pint of broth, gravy, or melted butter; stir well together gently, and simmer. The liver of the goose added to the stuffing is a great improvement.

Stuffing for Turkeys, Fowls, &c., see Roasting.

Vegetables.

Potatos.—Perhaps the best method of cooking potatos is to boil them with their skins on. Take a dozen or more equal-sized potatos, wash and scrub them until the skins are perfectly clean; put them in a saucepan that they will half fill, just cover them with cold water, put in a good handful of salt, and let them come to the boil, then draw the saucepan on one side, and *simmer gently* until they are —on feeling with a fork — tender; which will be, for medium-sized potatos, about twenty to twenty-five minutes after the water boils up; larger potatos will take thirty to forty minutes. When tender pour off the water, and let them stand with the lid off, by the side of the fire for five minutes to dry; then peel and serve very hot. Young *new* potatos should have their skins *rubbed* off with a coarse cloth, put into *boiling* water, and boiled until tender—say fifteen to twenty-five minutes, according to size—pour off the water and let them stand, with the lid raised but not removed, until quite dry; serve very hot, with a piece of butter in the dish. When the skins of the young potatos will not *rub* off, boil them with the skins on, as directed above. The best way to *steam* potatos is to peel them, throw them into salt and water, and when all are peeled, put them in a

steamer over a saucepan of boiling water, and let the water *boil fast* until the potatos are quite tender—which will be in half an hour, more or less according to size. To *mash* potatos, boil them in their skins as directed above, and when quite dry peel and mash them with a fork until they are smooth and free from lumps, then put them into another saucepan with a little butter, milk and salt, stir this mixture over the fire until very hot, dish lightly, and do *not* smooth the top, but you may brown with a salamander. Be careful of three things in the dressing of mashed potatoes:—1, that they are allowed to quite dry before peeling; 2, that they are beaten to a perfectly smooth paste; and 3, that when served they are light, floury, and not sticky. About the proper proportion of butter and milk is two ounces of the former and a gill of the latter, to every two pound dish of potatos. To *fry* potatos, wash and peel them, and cut them into rather thin slices, breadthways, or cut into thick slices and then into ribbons, and fry to a good colour in boiling lard or dripping; when crisp—say five minutes—drain them on a cloth or blotting-paper before the fire, and serve very hot with a little salt. Cold potatos may be fried in this way. To *bake* potatos, wash well, and put them, with their jackets on, into a moderate oven, until they are tender to the fork; serve in their skins. The best way to eat these is to rub them out with a napkin. To bake potatos under meat, peel them and sprinkle with salt. *Potato Rissoles* are made by boiling and mashing, as directed above, mixing with salt, pepper, a little minced parsley and onion (when liked), rolling into small balls, covering with egg and bread-crumbs, and frying in boiling lard or dripping for about eight or ten minutes. Drain on a cloth and serve very hot. Any kind of cold meat, ham, or tongue, or lean bacon, may be minced very fine and added to the mixture.

Cabbages.—Remove the damaged outside leaves, and cut the stalk short. If small summer cabbages make two cuts crosswise at the stalk end; if larger, halve them, and if very large, cut them in quarters. Wash them in strong salt and water, and let them remain in it for some little time—this destroys insects. Then put them—after draining or shaking the cold water out of them—into a large saucepan of *boiling* water, with a handful of salt and a teaspoonful of carbonate of soda to every two quarts of water. Boil *fast*, with the lid of the saucepan off, until the *stalk* is tender. Drain in a colander, and serve very hot in a dish with a strainer. A large cabbage will take thirty to forty minutes, and a small summer cabbage ten to fifteen. Great care must be exercised that *no* water is served with any kind of boiled vegetables.

Brussels Sprouts and Young Greens are boiled in the same way as cabbage, in a large pan of boiling water, and boiled *fast* till done.

Green Peas.—Choose them young and fresh; shell them, wash well in cold water, and drain in a colander. Then put them into a large saucepan (say half a gallon) of *boiling* water, with a handful of salt, a small lump of sugar (unless the peas are of a sweet kind), and—when the peas are old and the water hard—half as much carbonate of soda as will lie on a sixpence; let them boil *fast*, with the lid of the saucepan off, until quite tender, but not smashed. Drain in a colander, and serve very hot in a hot vegetable dish, with a bit of butter in the middle. Some cooks either boil a few sprigs of fresh mint with the peas, or garnish with some boiled separately. This is entirely a matter of taste. The various modes of stewing with lamb, veal, &c., will be found under the head *Stewing*.

French Beans.—Prepare by cutting off each end, and the strings which go down each side, then slice up thin and lay them in salt and water for a little while. Put them on in *boiling* water, with a handful of salt and half a teaspoonful of carbonate of soda to two quarts of water, and keep them boiling fast, with the lid off, until

tender, say ten to twenty minutes—fast boiling—according to size. Drain and serve very hot. When very young these beans are not sliced up, but simply have each end cut off.

Scarlet Beans are cooked in the same way as French beans. The French cooks, after they are boiled as above, dry the beans in a stewpan over the fire, and when quite hot, add a spoonful of gravy, a little butter, lemon juice, pepper and salt; shake the whole till the butter is melted, and then serve.

Broad Beans.—Shell the beans and put them on in plenty of boiling water, with a handful of salt, and boil *fast* until tender—say fifteen to twenty-five minutes, according to size. Drain, and serve with a tureen of parsley and butter. If the beans are very old take off the skins after boiling.

Haricot Beans.—Pour boiling water over your white haricots, and afterwards remove the skins; put on to boil, in cold water, enough to cover them, adding *hot* water as the former evaporates; when quite tender take out and dry. Roll a bit of butter in flour, put into a stewpan with a few minced onions; add a little gravy, pepper, and salt. Toss the beans into this; move them about for five or ten minutes over the fire, and serve in a large tureen.

Cauliflowers. — Take off the outer leaves, and cut the stalks short; put into *strong* salt and water for an hour, to draw out the insects. Put them into fast boiling water with a handful of salt; leave the saucepan uncovered, and boil fast for about fifteen to twenty minutes, *skimming* the water from time to time; when tender, strain and serve, with plain melted butter, a little of which may be poured over. Large cauliflowers should be cut in halves, and very large ones quartered, before soaking in the salt and water, as this vegetable is frequently attacked by insects.

Brocoli is dressed the same as cauliflower.

Spinach.—Take a pailful of spinach and wash it thoroughly in several waters, until quite free from grit; then put it into a large saucepan with a *tumbler* of cold water, and a couple of handfuls of salt, press close together from time to time, and when quite tender—say ten or twelve minutes—take it out, drain it, and then press *all* the water out and chop very small; then put it into a stewpan with pepper, a little lemon-juice, and a pat of butter, stir over the fire for about five minutes, and serve very hot, with sippets of bread. Poached eggs may be served on spinach.

Turnip Tops.—Boil as directed for cabbage.

Spanish Onions.—Take six equal-sized Spanish onions, and put on in plenty of boiling water, with the *skins on;* boil for an hour. Then peel, put into a baking dish with a little butter, and bake for a couple of hours in a moderate oven. Serve with brown gravy, pepper and salt. They may also be stewed in a pint of gravy — being first peeled; simmer *very gently* until tender—say two to three hours; a large piece of butter will do instead of the gravy, but the onions must be moved about now and then, and must *only just* simmer.

Carrots, Parsnips, and Turnips are all boiled in the same way. Remove the tops, wash, scrape, and cut out all bruises, specks, &c. Cut, *lengthwise,* into quarters; put them on in plenty of fast-boiling water, with a handful of salt. They should boil without stopping until quite tender, which time varies greatly with the age and size of the vegetables. Turnips are quickest done, then parsnips, and, longest, carrots — large ones being often over two hours boiling. To *mash* turnips, boil as above, and drain in a colander; squeeze them as dry as you can, and then rub them through a colander or sieve; put into a stewpan with a pat of butter, a little milk, white pepper, and salt, and stir for ten minutes, when serve.

Tomatos.—Take off the stalks and put them in a stewpan with a little gravy; stew gently till tender—say twenty minutes to half an hour; thicken with a bit of butter rolled in

flour, season with salt and Cayenne, boil up and serve. They may also be sliced and stewed in butter until tender—say twenty minutes—when stir in a wineglass of vinegar, and serve with any sort of roast meat. Many cooks bake them in butter, with a high seasoning of pepper and salt. This way they take about thirty to forty minutes.

Truffles.—Wash some fine truffles thoroughly clean, wrap in buttered paper and bake in a hot oven for sixty or seventy minutes. Remove the paper and serve. As truffles are indigestible they should be eaten sparingly.

Mushrooms.—Wipe the mushrooms, cut off the ends of the stalks, peel, and broil over a clear fire. On every mushroom put a bit of butter and a squeeze of lemon, pepper and salt; serve very hot. Button mushrooms may be stewed for about half an hour in gravy, with a little Cayenne, nutmeg, and salt.

Asparagus should be cooked as fresh as possible. Scrape the stems, and tie up in bundles—the heads put all the same way—of fifteen or twenty heads; then cut them all the same length, put them into fast boiling water, with a handful of salt; boil quickly for fifteen to twenty minutes, or until quite tender; dish upon toast and serve with plain melted butter.

Sea-Kale is dressed in the same way as asparagus, which *see*.

Celery may be stewed in a little white stock (*see* Receipt), with a gill of cream, a thickening of butter and flour, and seasoning to taste. To serve with cheese and eat raw, wash clean, take away all unsightly pieces, slice it lengthwise if large, and serve in a celery glass, half full of water. (*See* Salad).

Vegetable Marrow.—Cut into quarters or slices, take out the seeds, put on in boiling water with a little salt, and boil until quite tender. Serve with melted butter. Or you may, after boiling them in slices, cover with egg and bread crumbs, or dip them into batter, and fry in boiling lard.

Artichokes. — Wash in several waters, and boil as directed for cabbages, which *see*.

Jerusalem Artichokes. — Wash and peel; put them on in cold water, with a handful of salt, enough to just cover them; boil gently till quite tender—say fifteen to twenty minutes after the water boils up; serve very hot, with melted butter.

Lettuces. — To serve plain, wash carefully in salt and water, and then in plain water, pick off the outer leaves, drain in a colander, and cut into quarters, lengthwise. (*See* Salad).

Cucumbers. — Peel and cut, beginning at the thick end, into very thin slices, season with pepper and salt. Dish, and serve with salad oil and vinegar, or vinegar only, over. (*See* Salad).

Horseradish.—Put the root into weak salt and water for an hour; wash thoroughly, and scrape very thin with a sharp stiff knife. This is always served with roast beef. A good plan is to keep a little scraped, and kept in a glass bottle with vinegar.

Salads.—All fish salads are made precisely as directed for lobster salad. The best dressing for salad, according to the English taste, is the yolk of hard eggs rubbed up with oil, vinegar, mustard, pepper, and salt; some add a little sugar. As few persons agree as to which of these ingredients should predominate, it would be useless to give instructions for the mixing, the best way being to purchase the ready-made salad-dressing of some good pickle-maker. Watercresses are, perhaps, the most wholesome vegetable for salads; and then the lettuce, from its sedative properties. Celery is generally mixed with salad, and where onions are liked, they should always form part of the salad, as they give a warmth which is wanting in the other vegetables. To those who like the flavour, it is recommended to rub the bottom of the salad bowl with a clove of garlic, without, however, putting any portion into the salad.

Tomato Salad.—Take from four to six tomatoes (according to size), let

them be fully ripe and fresh, slice them in thin rounds, lay them in a glass dish arranged neatly; then pour over sufficient vinegar to barely cover them, and add a spoonful of salt and a very little pepper; let the salad stand about two hours before serving. The above is excellent with either cold or hot meat, fish, &c., and is a very wholesome and pleasing dish.

Fruit.

In serving a dessert in summer be careful the fruit is all freshly gathered, and perfectly ripe. A nice selection of fresh fruit, with a little crystallized fruit, a few *bon-bons* and fancy biscuits, preserved ginger, fruit ices, and powdered loaf sugar is a dessert at once tasteful and comparatively inexpensive. In winter time apples, oranges, nuts, almonds, raisins, and dried and crystallized fruits must take the place of the fresh. These should be arranged with taste, and the ornamental leaves of various fruits interspersed.

Stewed Pears and Pippins. — All kinds of winter pears form a very good dish, simply peeled, cut into slices, and stewed gently with a little sugar, water, cloves, and cinnamon, adding a little lemon juice; or they may be stewed in French white wine with similar seasoning; or be baked in an oven in the same way, adding a little port wine to increase the flavour and improve the colour. The addition of a little fresh lemon-peel is an improvement. To stew pippins, and other apples, core them, pare thin, and throw into water. For every pound of fruit, make a syrup with half a pound of refined sugar and a pint of water. Skim well, and put in the pippins to stew till clear, then grate some lemon-peel over them, and serve cold in the syrup.

Baked Pears, Apples, &c.—Bake in a moderate oven with sugar.

[For all other modes of cooking and preserving, or otherwise dressing fruit, *see* the various receipts under Puddings and Pies, Pastry, Jellies, Sick-room Cookery, Sauces, Preserving, Confectionery, &c.]

Curing, Pickling, Preserving.

Curing and Potting are terms applied to the treatment of meat, &c., with salt; *Pickling* to the preparation of fresh fish, vegetables, &c., with vinegar, and *Preserving* to the modes of treating fruits and vegetables with sugar, &c. *A Good Pickle* for pork hams, tongue, or beef is the following: —Put two gallons of water, two pounds of brown sugar, two pounds of bay-salt, two pounds and a half of common salt, and half a pound of saltpetre, in a deep earthen pan, with a cover to fit close. Before putting in the meat sprinkle it well with coarse sugar, and drain. Pack close; so that the pickle may cover. This pickle is not to be boiled. A small ham may lie fourteen days, a large one three weeks; a tongue twelve days, and beef in proportion to its size. They will eat well out of the pickle without drying. When they are to be dried, let each piece be drained over the pan; and when they cease to drop, take a clean sponge and dry thoroughly. Six or eight hours will smoke them; a little saw-dust and wet straw burnt will do this. If put into a chimney, sew them in coarse cloth, and hang them a week. This pickle, if skimmed before each pickling, will last for years.

To Cure Pork.—Bone, and cut into pieces. Rub with saltpetre, and then with common salt and bay-salt, mixed. Put a layer of common salt at the bottom of tub, cover each piece with salt and lay them even one upon another; fill the hollow places with salt. As the salt melts on the top, strew on more, lay a coarse cloth over the vessel, a board over that, and a weight on the board. Cover close, strew on more salt, as may be necessary, and the pork will keep good the year round.

To Cure Bacon.—Place the meat on a table; salt, with a little nitre, added, well all over. Some straw is then placed on a floor, a flitch laid thereon, with the rind downwards—straw laid above this, then another flitch, and so on; above the whole is placed a board, and weights above all. In three weeks or a month the meat is sufficiently

salted and is hung up to the kitchen rafters. The Irish practice of burning wood and turf imparts a sweetness to the bacon thus cured.

To Cure Hams.—Rub the legs of pork with salt, and leave them for three days to drain; throw away the brine. For hams of from fifteen to eighteen pounds weight, mix together two ounces of saltpetre, one pound of coarse sugar, and one pound of salt; rub with this, lay in deep pans with the rind down, and keep for three days well covered; then pour over a pint and a half of vinegar, turn them in the brine, and baste with it daily for a month; drain well, rub with bran, and hang for a month high in a chimney, or a smoking house, over a wood fire to smoke.

To Pot Veal.—Cut a fillet into four pieces; season with pepper, salt and a little mace; put the veal into a pot with half a pound of butter; tie a paper over it, and bake three hours. Cut off the outsides; pound the meat in a mortar with the fat of the gravy, till of the thickness of paste; then pack close in pots, press down hard, and when cold, pour clarified butter over it. It is fit to eat in a month.

Venison, Ham, Fowls, Pigeons, Poultry, &c., may be potted in the same way.

Brawn.—Having cleansed a large pig's head thoroughly, and rubbed it with salt, boil it until the bones can be removed; season with salt and pepper, and, while hot, lay the meat in a mould. Press it down with a board and heavy weight, and let it remain in a cool place for six hours. Then boil for about an hour, covering the mould with the liquor in which the head was first boiled; press again after this boiling. The flavour is improved by adding in layers. when the mould is filled, some salted and boiled tongue in thin slices. The tongue must be peeled. A sucking pig may be collared in the same way.

Meat or Fish Preserved in Sugar.—Rub the joint or fish (after being opened) with sugar, and leave it for a few days to dry. If intended for long keeping, dry it after this, taking care to expose new surfaces to the air frequently, to prevent mouldiness. Fish preserved in this manner will be found, when dressed, superior to that which has been cured by salt or smoke.

Pickling.

To Pickle Salmon.—Split the fish, after it has been scaled and cleaned, and divide it into convenient pieces. Lay the pieces in a shallow kettle, with as much water as will cover them. To three quarts add one pint of vinegar, two or three ounces of salt, twelve bay leaves, six blades of mace, and a quarter of an ounce of black pepper. When boiled enough, drain and put it on a clean cloth; then put more salmon into the kettle, and pour the liquor upon it, and so on till all is done. After this, if the pickle be not well-flavoured with vinegar and salt, add more, and boil quick for three quarters of an hour. When all is cold pack the fish in deep pans or tubs, and let there be enough pickle to plentifully cover. Preserve it from the air.

To Pickle Mackerel.—Clean and divide large mackerel; cut each side into three parts; take pepper, nutmegs, mace, cloves, and salt, all finely powdered; mix, and having made a little hole in each piece of fish, force the seasoning therein, rub also some on the outside; then fry brown in oil, let them stand till cold, put into a stone jar and cover with vinegar. If to be kept any time, pour oil on top.

To Pickle Mushrooms.—Clean small button mushrooms, and put them into cold vinegar, and allow it to come slowly to a boil; drain and lay them in a cloth till cold, and then put them into fresh vinegar. If very small, they should not be allowed to boil, as so strong a heat might destroy them. When dried, they may be put again into the vinegar after it had been cooled. A little mace will improve the flavour, but no hot pepper should be used.

Pickled Capers.—Directly they are gathered put the capers into a jar with strong vinegar and salt, leaving two

inches of vinegar over the capers, then tie the jar down with a skin; and if the capers are kept in a cool place, and a little fresh strong vinegar added from time to time, they will remain good for four or five years.

Pickled Cabbage.—Slice into a colander, and sprinkle salt over each layer. Drain two days, put into a jar, and cover with boiling vinegar, adding a few slices of red beet-root. If spice be used, it should be boiled with the vinegar. *Hard white cabbage* may be intermixed with the other, or cauliflowers cut into branches.

Cauliflowers, Brocoli, Beans, Nasturtiums, Artichokes, Radishes, &c., may be pickled in the same way.

Pickled Walnuts.—Take green walnuts before the inner shell is formed—which may be known by pricking them with a pin; if it goes through easily, they are young enough to pickle. Prick them in several places, to allow them to imbibe the salt, and keep them in strong brine for a fortnight, making fresh salt and water every three days; drain and put them in a jar, sprinkle with salt, and pour over boiling vinegar, some shallots, garlic, or onion may be boiled in the vinegar if the flavour be not disliked.

Pickled Onions.—Select young equal-sized onions, peel and steep them in strong salt and water for four days, changing the water two or three times; wipe perfectly dry, and put them into scalding milk; when the milk becomes cold, drain them, and dry each separately in a cloth; put into jars; pour over as much white wine vinegar, which has been boiled with white pepper, as will cover them; tie over first with wet bladder, and then with leather, and keep the jars in a dry place for use. A little powdered or crushed ginger may be added.

Preserving.

Bottled Fruit.—Burn a match in each bottle, to exhaust the air, then place in the fruit, quite dry and sound; sprinkle powdered sugar between each layer, put in the bung, and tie over; set the bottles, bung downwards, in a large stewpan of cold water, with hay laid between to prevent breaking. Put on the fire, and when the skins of the fruit are just cracking, take out, and put away for the winter.

Preserved Rhubarb.—Skin rhubarb and cut into two-inch pieces; take an equal weight of sugar; put sugar in preserving-pan on the fire to clarify, add a little whole ginger with very little water; put in the rhubarb, allow it to simmer for three hours, put in jars to cool, then cover up as in jams.

Preserved Damsons.—The sugar is to be pounded, and dissolved in the syrup before being set on the fire. Green sweetmeats will spoil if kept long in the first syrup. Fruit should be covered with mutton suet melted, to keep out the external air. Wet sweetmeats must be kept in a dry and cool place, with paper dipped in brandy laid over. Put into a saucepan over the fire, with water to cover the fruit. When boiled, strain off the liquor, and add to every pound of fruit wiped clean, as much refined sugar. Put one-third of the sugar into the liquor, set over the fire, and when it simmers put in the damsons. Boil, then take off, and cover close for half an hour. Set on again, and let simmer while over the fire, after being turned. Take out, put them into a basin, strew all the sugar that remains on them, and pour the hot liquor over. Let stand covered till next day; boil up once more; then take out and put into pots. Boil the liquor till it is a jelly, and when cold, pour it over the fruit.

All Sorts of Stone Fruit may be preserved in this way.

Candied Citron, Lemon or Orange Peel.—Soak the peels in water, which must be frequently changed, until the bitterness is extracted; then drain and place them in syrup until they are soft and transparent; the strength of the syrup being kept up by boiling it occasionally with fresh sugar. When taken out they should be drained and placed on a sieve to dry.

Jams.—All sorts of stone fruit, currants, &c., may be made into jams by the potting method:—Pick the fruit from the stalks, and to every pound add one pound of lump sugar. Boil the

whole half an hour, skim and stir it all the time; put it into pots, tightly covered and fix with string or gum. In stone fruits, crack kernels, and put into the jam when potted. Brown sugar may be used for these jams.

Raspberry and Strawberry Jam.—Pick the fruit, which must be perfectly fresh, ripe and dry. Strew over it an equal weight of lump sugar, and half as much of the juice of white (or red) currants. Boil the whole over a clear fire for half an hour, skim it well, put it into pots or glasses, and let stand till next day. Cover with white paper dipped in brandy or whisky, then cover as above. All jams and jellies should be covered with white paper dipped in brandy or whisky.

Marmalade.—Take Seville oranges and lump sugar, weight for weight, cut the rind very thin, and put it in a preserving pan; cover with cold water, and boil till quite soft; strain through a sieve, and preserve the water; cut the rind into thin chips half an inch long, mix them with the water they were boiled in; then take the spongy white off the orange very clean and throw it away. Divide the inside of the orange into quarters, and scrape the pulp off the fibry part or fine skin of the orange; put the latter with the seeds, put the pulp with the chips; then wash the seeds with a little boiling-water through a sieve, which will form a thick jelly, add that to the pulp and chips. Put in preserving pan with sugar, boil for half an hour, and next day cover down as for jams.

Confectionery, &c.

Compotes.—Take a pint and a half of cold water and a pound of lump sugar; boil them for fifteen minutes, skimming constantly; then add, while the syrup is boiling, any kind of fruit, such as peeled and quartered apples or oranges, whole apricots, peaches, damsons, plums, greengages, &c. Let the whole simmer very gently until the fruit is quite tender but not broken, when take it out carefully, and arrange in an ornamental glass dish. Then give the syrup a sharp boil for a few minutes, skimming off any scum that may rise; let the syrup cool, pour over the fruit, and when cold, serve, garnished with strips of candied peel, *bon-bons*, &c. This syrup is intended *for immediate use only*, and will not keep long. If apples are used, peel, halve, and core them, and give each piece a drop or so of lemon-juice; apricots and other stone fruit may be halved, the stones removed, and, if liked, the kernels boiled in the syrup. Oranges must be carefully peeled, the white pithy skin removed with a blunt knife so as not to injure the inner skin, and divided in their natural way into, say, four or five pieces each; a little of the peel may be cut thin and boiled in the syrup. Compotes should always be served in glass dishes. Owing to the ease with which they are prepared, their wholesomeness and tasty appearance, they are permanent favourites in all homes.

Candied Fruits are so difficult to prepare properly, owing to the great care and experience needed in boiling the sugar to make a syrup of proper consistency, that the best and cheapest plan is to buy what you require of a good confectioner. A simple and excellent substitute is—

Iced Fruit.—Take any fresh fruit—such as strawberries, currants, plums, &c., and remove all stalks and bruised fruits. Then beat up the whites of four eggs and mix with half a pint of water. Dip your fruit in this, drain it, and roll it well in finely powdered sugar; lay on paper for several hours in a dry place when the sugar will have crystallized over the fruit. Serve at dessert.

Butter Scotch.—Take a pound of good brown sugar, and put it into a delicately clean pan, with four ounces of butter, beaten to a cream. Stir constantly over the fire for about twenty minutes to half an hour (the way to tell when this is done is to drop a little on to a dish, and if this, when cool, does not stick to the teeth when bitten it is done); just before it is done put in half an ounce of powdered

ginger. Pour the mixture into a buttered tin or dish, and put into a cool place to set.

Everton Toffee—Dissolve in a pan over the fire a pound of powdered loaf sugar in a gill of water; beat to a cream four ounces of butter, and add it. Then proceed as directed for butter-scotch, substituting four or five drops of essence of lemon for the powdered ginger.

Confectionery, beyond the few simple receipts here given, cannot be taught in books — the simplest, best, and cheapest way is to buy what you want ready made.

In speaking of confectionery, it should be remarked that all the various preparations above named come, strictly speaking, under that head; for the various fruits, flowers, herbs, roots, and juices, which, when boiled with sugar, were formerly employed in pharmacy as well as for sweetmeats, were called *confections*, from the Latin word *conficere*, "to make up;" but the term confectionery embraces a very large class indeed of sweet food, many kinds of which should not be attempted in the ordinary cuisine. The thousand-and-one ornamental dishes that adorn the tables of the wealthy should be purchased from the confectioner; they cannot profitably be made at home. Apart from these, cakes, biscuits, and tarts, &c., the class of sweetmeats called confections may be thus classified:—1. Liquid confects, or fruits either whole or in pieces, preserved by being immersed in a fluid transparent syrup; as the liquid confects of apricots, green citrons, and many foreign fruits. 2. Dry confects are those which, after having been boiled in the syrup, are taken out and put to dry in an oven, as citron, and orange-peel, &c. 3. Marmalades, jams, and pastes, a kind of soft compounds made of the pulp of fruits or other vegetable substances beat up with sugar or honey; such as oranges, apricots, pears, &c. 4. Jellies are the juices of fruits boiled with sugar to a pretty thick consistency, so as, upon cooling, to form a trembling jelly; as currant, gooseberry, apple jelly, &c. 5. Conserves are a kind of dry confects, made by beating up flowers, fruits, &c., with sugar not dissolved. 6. Candies are fruits candied over with sugar after having been boiled in the syrup.

TERMS USED IN MODERN COOKERY.

Aspic—A transparent jelly used as an outer moulding for fish, game, poultry, &c.; also for decorating and garnishing.

Assiette (a plate)—Small entrées, not more than a plate will hold. Fruits, cheese, chesnuts, biscuits, &c., at dessert, if served upon a plate, are called *assiettes*.

Assiette volante—A dish handed round by a servant, but not placed on the table. Small cheese *souffles*, and other dishes, served hot, are often made *assiettes volantes*.

Bain-marie—An open saucepan or kettle of almost boiling water, that a smaller vessel can be set in, for cooking and warming, extremely useful for keeping things hot, without effecting any alteration in either their quality or quantity. If you keep broth, soup, or sauce by the fire, it reduces and thickens. This is obviated by the use of the *bain-marie*, in which the water should be hot, but not boiling.

Béchamel—White sauce, now often used, much commended by Francatelli.

Blanch—To whiten poultry, vegetables, fruit, &c., by dipping them into boiling water for a short time, and afterwards into cold water, letting them remain there for a while, till they are whitened.

Blanquette—A kind of fricassée much used in French cookery.

Bouilli—Beef, or other meat, boiled or stewed. In France, the term is applied only to beef boiled, the gravy from which forms stock for soups.

Bouillie—A French dish, something like hasty pudding.

Bouillon—A thin soup or broth, much used by the French peasantry.

Braise—To stew meat, which has

been previously blanched, with fat bacon, until it is tender.

Braisière—A saucepan, with raised edges, to hold fire on the top. Indispensable in many made dishes.

Caramel—Burnt sugar. A little piece of sugar is placed at the bottom of a saucepan, and burned; upon it is poured stock or water, little by little, till the whole is brown. Caramel is used to colour meats and give tone to sauces, entremets, &c.

Casserole—A crust of boiled rice, after having been moulded into the form of a pie, filled with a fricassee of white meat or a purée of game.

Compote—A stew, as of fruit, or game, or pigeons.

Consommé—The name by which rich soup, stock, or gravy is commonly known.

Croquette—A ball of fried rice or potatoes.

Croutons—Sippets of bread, toasted or browned for hashes, &c.

Désosser—To bone, or take out the bones from poultry, game, or fish; an operation requiring some tact.

Entrées—Tasty little side dishes, served with the first course.

Entremets—Small side dishes, served with the second course.

Escalopes—Collops; small, round, thin pieces of tender meat or fish, beaten with a rolling-pin to render them tender.

Feuilletage—Puff-paste, which see.—

Foncer—To put slices of ham, veal, or thin broad slices of bacon, into the bottom of a saucepan.

Galette—A broad, thin cake, used for dessert.

Gateau—Properly speaking, a cake; but occasionally used to denote a small pudding or tart.

Glacer—To glaze or spread a thick and rich sauce or gravy, called glaze, upon hot meats or larded poultry. A feather or brush is used to put on the glaze. In confectionery, "to glaze" means to ice fruit and pastry with sugar, which glistens when cold and crisp.

Hors d'œuvres—Small dishes, or *assiettes volantes* of sardines, anchovies, and similar relishes, used during the first course.

Maigre—Soup, broth, or gravy, without meat, commonly eaten in Roman Catholic countries on fast days.

Matelote—A rich fish-stew, usually composed of eels, carp, trout, or barbel, made with wine.

Mayonnaise—Cold sauce or salad-dressing for salmon and lobster. Much patronised for luncheons and cold collations.

Menu—The bill of fare, always given at large dinners.

Mernique—A sort of icing, made of whites of eggs and sugar, well beaten.

Miroton—Slices of beef for vinaigrette, or ragout, or onion stew. The slices are larger than collops.

Mouiller—To add water, broth, or any other liquid during cooking.

Paner—To cover meat, &c., for cooking in the oven, on the gridiron, or frying-pan, with very fine bread-crumbs.

Piquer—To lard poultry, game, meats, &c., with strips of fat bacon; always be done according to the grain of the meat, so that, when cut, each slice will contain some of the larding.

Pœlée—Stock, used instead of water for boiling turkeys, sweetbreads, fowls, and vegetables. Not common in English cookery.

Purée—Vegetables or meat reduced to a smooth pulp, and afterwards mixed with sufficient liquid to make it of the consistency of thick soup.

Ragout—A stew or hash of various meats, poultry, game, &c.

Remoulade—Salad-dressing.

Rissoles.—Balls of finely minced meat (of different kinds) rolled in flour in the hands, fried in oil till they are a deep brown.

Roux, brown and white—French thickening.

Salmi—Ragout of previously roasted game or poultry.

Sauce piquante—A sharp sauce, with a predominating flavour of vinegar or lemon.

Sauter—To dress with sauce in a saucepan, shaking it about continually during the process.

Tamis—Tammy, a kind of open cloth or sieve, through which to strain

broth and sauces, so as to rid them of the small bones, froth, &c.

Tourte—Tart, fruit pie.

Trousser—To truss a bird for roasting or boiling.

Vol-au-vent—A rich crust of very fine puff-paste, which may be filled with various delicate ragouts or fricassées of fish, flesh, or fowl. Fruit may also be enclosed in a *vol-au-vent*.

HINTS ON CONDUCT IN THE KITCHEN.

Cleanliness is the most essential ingredient in the art of cooking; a dirty kitchen being a disgrace both to mistress and maid. Be clean in your person, paying particular attention to the hands, which should always be clean. Do not go about slipshod. Provide yourself with well-fitting shoes. You will find them less fatiguing in a warm kitchen than loose untidy slippers.

Provide yourself with at least a dozen good-sized serviceable cooking aprons, made with bibs. These will save your gowns, and keep you neat and clean. Have them made large enough round, so as to nearly meet behind.

When you are in the midst of cooking operations, dress suitably. In the kitchen, for instance, the modern crinoline is absurd, dangerous, out of place, and extravagant. It is extravagant, because the dress is, through being brought nearer the fire, very liable to get scorched, and when once scorched, soon rots, and wears into holes.

Never waste or throw away anything that can be turned to account. In warm weather, any gravies or soups that are left from the preceding day should be just boiled up and poured into clean pans. This is particularly necessary where vegetables have been added to the preparation, as it then so soon turns sour. In cooler weather every other day will be often enough to warm up these things.

Every morning visit your larder, change dishes and plates when necessary, empty and wipe out the bread-pan, and have all in neatness by the time to order the dinner. Twice a week the larder should be scrubbed out.

If you have a spare kitchen cupboard, keep your baked pastry in it, it preserves it crisp, and prevents it becoming wet and heavy, which it is liable to do in the larder.

In cooking, clear as you go; that is to say, do not allow a host of basins, plates, spoons, and other utensils, to accumulate on the dressers and tables whilst you are engaged in preparing the dinner. By a little management and forethought, much confusion may be saved in this way. It is as easy to put a thing in its place when it is done with, as it is to keep continually moving it to find room for fresh requisites. For instance, after making a pudding, the flour-tub, pasteboard, and rolling-pin should be put away, and any basins, spoons, &c., taken to the scullery, neatly packed up near the sink, to be washed when the proper time arrives. Neatness, order, and method should be always observed.

Never let your stock of spices, salt, seasonings, herbs, &c., dwindle down so low that some day, in the midst of preparing a large dinner, you find yourself minus a very important ingredient, thereby causing much confusion and annoyance.

If you live in the country, have your vegetables gathered from the garden at an early hour, so that there is ample time to make your search for caterpillers, &c. These disagreeable additions need never make their appearance on table, in cauliflowers or cabbages, if the vegetable in its raw state is allowed to soak in salt and water for an hour or so. Of course, if the vegetables are not brought in till the last moment, this precaution cannot be taken.

Be very particular in cleansing all vegetables free from grit. Nothing is so unpleasant, and nothing so easily avoided, if but common care be exercised.

When you have done peeling onions, wash the knife at once, and put it away to be cleaned. Nothing is nastier, or more indicative of a slovenly and untidy cook than to use an oniony knife in the preparation of any dish where the flavour of the onion is a disagreeable surprise.

After you have washed your saucepans, fish-kettle, &c., stand them before the fire for a few minutes, to get thoroughly dry inside, before putting them away. They should then be kept in a dry place, in order that they may escape the deteriorating influence of rust, and thereby be quickly destroyed. Never leave saucepans dirty from one day's use to be cleaned the next; it is slovenly and untidy.

Empty soups or gravies into a basin as soon as they are done; never allow them to remain all night in the stock-pot.

In copper utensils, if the tin has worn off, have it immediately replaced.

Pudding-cloths and jelly-bags should have your immediate attention after being used; the former should be well washed, scalded, and hung up to dry. Let them be perfectly aired before being folded up and put in the drawer, or they will have a disagreeable smell when next wanted. No soda should be used in washing pudding-cloths.

After washing up your dishes, wash your dish-tubs with a little soap and water and soda, and scrub them often. Wring the dish-cloth, after washing this also, and wipe the tubs out. Stand them up to dry after this operation. The sink-brush and sink must not be neglected. Do not throw anything but water down the sink, as the pipe is liable to get choked, thereby causing expense and annoyance.

Do not be afraid of hot water in washing up dishes and dirty cooking utensils. As these are essentially greasy, lukewarm water cannot possibly have the effect of cleansing them effectually. Do not be chary also of changing and renewing the water occasionally. You will thus save yourself much time and labour in the long run.

Clean your coppers with turpentine and fine brick-dust, rubbed on with flannel, and polish them with a leather and a little dry brick-dust.

Clean your tins with soap and whitening, rubbed on with a flannel; wipe them with a clean dry soft cloth, and polish with a dry leather and powdered whitening. Mind that neither the cloth nor leather is greasy.

Do not scrub the inside of your frying-pan, as, after this operation, any preparation fried is liable to catch or burn in the pan. If the pan has become black inside, rub it with a hard crust of bread, and wash in hot water, mixed with a little soda.

Punctuality is an indispensable quality in a cook.

Napkins; to Fold them.

One of the true luxuries of the modern dinner table is the table napkin; but the difficulty with most young housekeepers is how to fold it. Numerous designs have been adopted from time to time, but the following are simple and efficient. A napkin should be laid to every plate. To properly fold the napkins, they should be starched.

The Mitre.—Fold the napkin into

Fig. 1.

three parts, lengthwise, one side towards, and the other from you. Turn down the right hand corner, and turn up the left one, as in fig. 2, A and B.

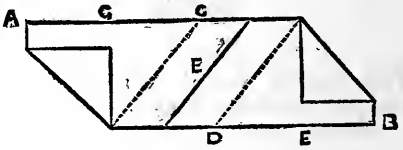


Fig. 2.

Then turn back the point A towards the right, so that it lie behind C; and B to the left, so as to be behind D.

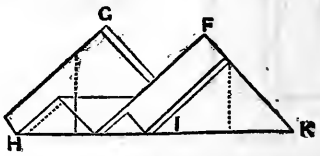


Fig. 3.

Double the napkin *back* at the line E; then turn up F from the front and G

from the back, when the whole will appear as in fig. 3. Bend the corner H toward the right, and and tuck it in behind I, and turn back the corner K towards the left at the dotted line; and tuck it into the corresponding part at the back. Your mitre is now ready for the bread, which may be placed in the centre, or beneath.

The Fan or Flirt.—This is a simple and pretty style. Fold the napkin into three parts, lengthwise; then fold across the breadth, commencing at one end, and continuing *from and to yourself* in zigzag folds about two inches

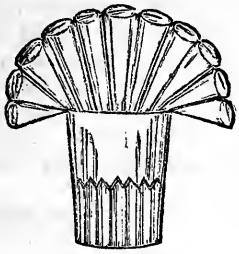


FIG. 9.

broad, until the whole napkin is so creased. Place in the tumbler, and it will fall over as in the illustration.

FIG. 4.

This napkin does not require to be starched to make a fan.

The Collegian.—Fold the napkin into

FIG. 5.

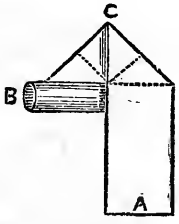


FIG. 6.

three parts, longways; then turn down the two sides, towards you, so that they appear as in fig. 5. Then roll up the part A underneath, until it looks like B in fig. 6. Now take the corner B, and turn it up towards C, so that the edge of the rolled part shall be even with the central line. Repeat the process on the other side, and turn the whole over, when it will appear as in the wood cut fig. 4. Place the roll or cut bread under the flap at G.

The Slipper.—Fold the napkin into three parts, lengthwise. Then turn down the two sides, as in fig. 5. Turn the napkin over and roll up the lower part as in fig. 8, A, B. Now turn the corner B towards C, so that it will appear as at D. Repeat this on the other

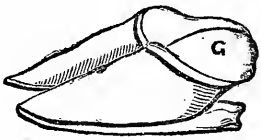


FIG. 7.

side; and then bring the two parts E together, so that they bend at the

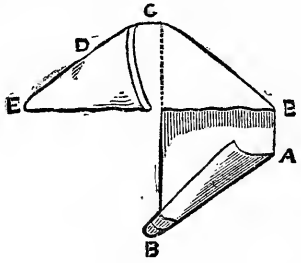


FIG. 8.

dotted line. The napkin will now appear in the shape of the slipper, fig. 7. The bread is placed in the hollow at G.

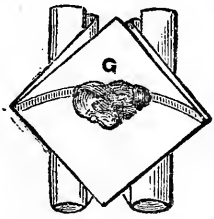


FIG. 10.

The Neapolitan.—Fold the napkin into three parts, lengthwise. Then

fold one of the upper parts upon itself, from you, and fold down the two sides, so as to appear in fig. 5. Now roll up the part A underneath, until it comes to the shape of the dotted lines in fig.

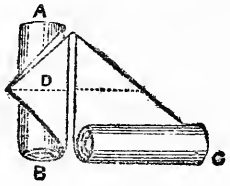


FIG. 11.

11 at B. Turn up the corner B towards C, so that the edge of the rolled part be even with the central line. Repeat the same process on the other side; turn the whole over, and you have the Neapolitan as in fig. 10 with the bread beneath the flap G.

Bread Making.

Household Bread.—Take ten pounds of flour, and three quarts of soft water—filtered rain-water is best—about lukewarm, if in summer, and rather warmer in winter. Put the water into a large pan, add a tablespoonful of salt, and a portion of the flour stirring well until about the consistency of batter. Add rather more then half a pint of good yeast, and then more flour, mixing the whole well. German yeast is a good substitute for brewers' yeast. Put the pan, covered with a cloth, and with a little dry flour strewed over the dough, before the fire a few minutes. About a third of the flour is to be kept back in this first operation, and to be well kneaded in when the mixture has risen properly before the fire. After the rest of the flour is added, put the dough again before the fire, and let it rise for a few minutes, then knead again, and bake in a quick oven, having previously made the dough into loaves, and pricked the surface of the dough with a fork, and placed it again before the fire. The baking, in an ordinary oven, will require about an hour to an hour and a quarter, for a four-pound loaf, and fifty minutes for a loaf of three pounds. If a heated oven be employed, it must be well heated before the dough is put into it. If *potatos* be mixed with the bread in the proportion of an ounce to two ounces to a pound, the flavour will be improved. First boil the potatos in their skins as directed (*see* Vegetables), then skinned, when dry, rub well up with milk or water boiled, and allowed to stand for a few minutes before it is used. Then add the mixture to the dish in which the dough is mixed. *Rice* may also be used. Take a pound of rice to ten pounds of wheat flour, boil the rice in a quart of water until it has become a complete pulp. Strain off the water, and beat the rice well in a mortar until it is completely crushed, and is entirely dissolved, then add the water in which it was boiled, and a pint of milk, and boil the whole together for an hour. Strain off the liquid and add it to the dish in which the dough is made, suppressing as much water from the process as the quantity of liquid obtained from the boiling of the rice will supply. The dough must in all cases be thoroughly kneaded. If the water be hard, a drachm of carbonate of soda may be added to three quarts of water, but this is unnecessary when the water is of a soft nature. To ascertain the proper heat of the oven, throw a small quantity of flour on the floor of the oven; if the flour turn black in a short time, without taking fire, it is considered of a proper heat. If this be not attended to, the bread will either be heavy and soddened, or scorched on the outside.

For *Rolls*, take a portion of the dough and mix up with a few tablespoonfuls of cream in which the whites of two or three eggs whipped have been put; knead them carefully, and add a little flour, if they be too moist. The dough for rolls should be taken off when it has risen the second time. After taking the dough from the fire the second time, it must be kneaded for half an hour on a board strewed with flour, *if intended for loaves*, but the rolls will not require more than five or six minutes kneading. They are then to be baked in a quick oven until they are nicely browned. A minute or two before they are done, they

should be taken out of the oven, and a brush dipped in the white of egg be passed over the top; then they are to be put into the oven again for one or two minutes.

When there is reason to suspect, either from the appearance or the smell of the flour, that it is not good, and there is still a *necessity* for using it, let it be baked for an hour in a very slack oven, and add to it, when making into dough, about ten grains of fresh carbonate of ammonia, carefully powdered, for every pound of flour. This will frequently correct any bad properties of the flour, and render the bread palatable.

Milk may be substituted for water in the manufacture of bread, but it does not improve the flavour if the flour be good.

Brown Bread.—The best is made of pure wheaten flour coarsely ground, but good bread is also made from a mixture of wheat, barley, and rye flour, in the proportion of two pounds of the first, to one of each of the other. Oatmeal may be substituted for the barley flour, or added to the barley and rye in the proportion of one-third. When making brown bread, use a larger quantity of yeast and less water, and knead for an hour. A nutritious brown bread is made by the addition of the flour of the haricot beans as follows:—two parts of wheaten flour, one of rye flour, and one of the bean flour. Generally speaking, brown bread requires longer baking than that from pure wheaten flour.

French Rolls. — To about seven pounds of fine flour add the whites of four eggs well beaten, and sufficient warm milk to make it into a stiff dough; work it together in the same way as for pie-crust, and let it rise before the fire under a cloth. As the outside becomes hard by being placed before the fire, it should be removed, and the remaining dough be well beaten, made into rolls, and set for a few minutes before the fire to rise, and then baked in a quick oven.

Barley Bread.—Take three pounds and a half of barley meal, mix well together in a large earthen pan, add yeast and warm water, and leave the dough to rise for one hour; it must then be kneaded and well worked together for twenty minutes, after which, make into one loaf, put it into the oven, and let it bake for four hours. The barley should be finely ground.

Indian Corn and Wheat Flour Bread.—Take a quart of corn meal and a little salt, and one quart of boiling water. Wet the meal, let it stand until it is blood-warm, then add two quarts of wheat flour, and half a pint of yeast, and let it rise. This quantity will make two loaves. Bake one hour and a half in a brisk oven.

Australian Meat.

Australian Beef and Mutton have lately come into use, owing to the high price of butchers' meat. Imported in tins, and being free from bone, Australian meat may be readily prepared for the table in the form of stews, hashes, soups, puddings, pies, &c.; when it makes a really nourishing, enjoyable, and cheap meal. The meat being perfectly fresh, without seasoning of any kind, it may be cooked in a variety of ways, with or without vegetables. For soups, dishes, collops, curries, haricots, stews, &c., it should be minced small, and seasoned. There is little needed in the way of cooking this best of all preserved meats, but the following receipts will be found useful:—

Minced Collops.—Take two or three pounds of minced beef or mutton; and simmer with the requisite quantity of water and onions, pepper, &c., at discretion, but *no salt.* This stew can either be eaten with bread and potatoes, or be used as a stock for other dishes. It should be garnished with small pieces of dry toast.

Irish Stew.—Minced mutton with carrots, turnips, onions and water. The proportions are: Meat, one pound; potatos, three pounds; carrot, turnip, onion, one pound each; water, half a gallon. Stew gently till the vegetables are done. If too thick, add more water, or the mutton may be cut into dice. During boiling, the cover should be kept on, and the pan well shaken at frequent intervals.

Haricot Mutton.—If the potatos be omitted, and carrots in thin slices substituted, the dish becomes a delicious haricot. This will take longer to stew, or the carrots will not be properly cooked. In all dishes in which carrots are used, from twenty to thirty minutes extra cooking are required. The haricot must be kept simmering, not boiling. The stew pan should be wide and shallow, so as to present a large surface for the fire to act upon.

Meat and Rice.—Take one pound of meat, minced, to one pound of rice. Add parsley and sweet herbs to taste, with pepper and salt. Stew till tender.

Meat and Potato Pie.—Take one pound of beef or mutton cut in thin slices; intermix two pounds of potatos, and half a pound of onion, cut small; add a little parsley and sweet herbs, and three pints of water. Stew for an hour, then put on the crust and bake. This is an excellent dish.

Mutton Ham.—Australian meat is brought to this country in two forms —*tinned and cured.* In the latter way the mutton is much admired. Before packing, the bone is extracted, and the meat is then packed in a swet pickle, rolled up in masses of about twelve pounds weight, and placed in casks, which are rendered air-tight by pouring over the meat a quantity of pure mutton fat, which keeps it sweet and sound. Mutton is also brought over in legs, and on being unpacked has a tempting red colour like ham. After arrival in America, these mutton hams are smoked, when they may be cooked in the following way:—Cut thin slices and place in the frying pan with a little water. When nearly done, throw away the water, and broil in a little dripping. The water extracts the salt, and brings up an unburnt flavour of the meat. With the addition of eggs, milk and flour, this is a capital dish. One pound of Australian meat, without bone, is equal to about one pound and a half of ordinary butcher's meat. Before using, the tin should be left open for a day; when it may be cooked in any of the ways recommended for fresh beef or mutton.

Soups.—Mince the meat and add whole peas, or other vegetables, cut into dice, with flavouring, or with curry, Chutney, or Worcester sauce to taste.

Rissoles, Meat Cakes, Sausage Rolls, Dumplings, &c.—Mince the meat, season with pepper, salt, and sweet herbs to taste, and cook as usual.

Beef Tea.—Mince the beef, add salt, simmer for two hours and strain.

Stock.—With bones, scraps of poultry and cooked meat, &c. Australian meat makes excellent *Stock for Soups, Broths and Hashes.* The fat on the top of the meat must be removed as soon as the tin is opened. This fat may be used for frying fish.

Cold Meat.—When cold, the minced meat is solid, when it may be cut in slices and eaten with salad or hot potatoes.

Australian Butter of fine quality is now imported in tins. It requires no preparation, but after the tin is opened it should be left exposed to the air for several hours. This is in every respect better than the cheap butter of the shops, much of which is grossly adulterated.

HOW TO CHOOSE MEAT, FISH, POULTRY, &c.

Beef.—The grain of ox beef, when good, is loose, the lean red, and the fat inclining to yellow. Cow beef has a closer grain, a whiter fat, and the lean of a paler red. Inferior beef, from old ill-fed animals, has hard, skinny fat or dark red lean. Prime meat pressed by the finger rises up quickly; when the dent made by pressure returns slowly or remains visible, the meat is of inferior quality.

Mutton should be firm, close in grain, and reddish, with the fat white and firm. If too young, the flesh feels tender; if too old, on being pinched, it wrinkles up. In young

mutton, the fat readily separates; in old, it is held together by strings of skin.

Veal should be delicately white, though it is often juicy and well-flavoured when rather dark in colour. If the fat round the kidney be white and firm-looking, the meat is prime, and recently killed. Veal will not keep so long as an older meat, especially in hot or damp weather; when deteriorating, the fat becomes soft and moist, the lean flabby, spotted, and spongy. The fillet of a cow-calf, preferable to that of a bull-calf, is known by the udder, and by the softness of the skin.

Lamb will not keep long after it is killed. The large vein in the neck is bluish in colour when the fore-quarter is fresh, green when becoming stale. In the hind-quarter, if not recently killed, the fat of the kidney will emit a faint smell, and the knuckle will have lost its firmness.

Pork.—When good, the rind is thin, smooth, and cool to the touch; when changing from being too long killed, it becomes flaccid and clammy. Enlarged glands in the fat, called kernels, are marks of an ill-fed or diseased pig.

Bacon and Ham should have a thin rind, the fat firm, the lean a clear red, without intermixture of yellow. To judge of the state of a ham, plunge a skewer into it right to the bone; on drawing it back, if particles of meat adhere to it, or if the smell be disagreeable, the ham is not good. A short thick ham is to be preferred.

Venison.—When good, the fat is clean, bright, and of considerable thickness. To know when it is necessary to cook it, plunge a knife into the haunch, and from the scent the cook must determine accordingly on dressing or keeping it.

Turkeys and Poultry generally.—The age of the bird is chiefly to be attended to. An old turkey has rough and reddish legs; a young one smooth and black. When fresh killed, the eyes are full and clear, and the feet moist. When it has been kept too long, the parts about the vent have a greenish tinge. Poultry, when young, have the legs and combs smooth; when old, they are rough, and on the breast are long hairs, instead of feathers. Fowls and chickens should be plump on the breast, fat on the back, and white-legged.

Geese.—Bills and feet are red when old, yellow when young. When fresh killed, the feet are pliable, stiff when too long kept. Geese are called green, while they are only two to four months old.

Ducks.—Choose them with supple feet, and hard, plump breasts. Tame ducks have yellow feet, wild ones red.

Pigeons.—Suppleness of the feet show them to be young; when getting bad from keeping, the flesh is flaccid.

Partridges, when young, have yellow legs and dark-coloured bills. Old partridges are indifferent eating.

Hares and Rabbits, when old, have the haunches thick, the ears dry and tough, and the claws blunt and rugged. A young hare has claws smooth and sharp, ears that easily tear, and a narrow cleft in the lip. A leveret is distinguished from a hare by a knob or small bone near the foot.

Woodcocks and Snipes, when old, have feet thick and hard; when young and fresh killed, they are soft and tender. When their bills become moist, and their throats muddy, they have been too long killed.

Turbot, and all flat white fish, are rigid and firm when fresh; the under side should be of a rich cream colour. When out of season, or too long kept, this becomes a bluish white, and the flesh soft and flaccid. A clear, bright eye in fish is also a mark of being fresh and good.

Cod is known to be fresh by the rigidity of the flesh, the redness of the gills, and the clearness of the eyes. Crimping much improves this fish.

Salmon.—Flavour and excellence depend upon its freshness and the shortness of time since it has been caught; for no method can completely preserve the delicate flavour it has when just taken out of the water.

Mackerel must be perfectly fresh. The firmness of the flesh, and the

clearness of the eyes, are the criterions of fresh mackerel, as they are of all other fish.

Herrings can only be eaten when very fresh, and like mackerel, will not remain good very long after they are caught.

Fresh-water fish, including Trout, Carp, Tench, Pike, Perch, &c., present the same indications of being fresh or otherwise as previously stated.

Lobsters recently caught have always some remains of muscular action in the claws, which may be excited by pressing the eyes with the finger; when this cannot be produced, the lobster has been too long kept. The tail preserves its elasticity if fresh, but loses it as soon as it becomes stale. When light, lobsters are watery and poor.

Crabs. — Crabs have an agreeable smell when fresh, and are chosen by observations similar to those exercised in the choice of lobsters.

Prawns and Shrimps, when fresh, are firm and crisp.

Oysters, when fresh, have their shells firmly closed; when the shells of oysters are opened they are dead, and unfit for food.

PHYSIOLOGICAL AND CHEMICAL CLASSIFICATION OF FOOD.

CLASS I.—*Alimentary or Necessary.*

				Examples.
GROUP 1. Mineral substances				Water, common salt, the ashes of plants and animals.
GROUP 2. Non-nitrogenous force-producing substances, incapable of forming flesh or muscle.	Force producers.	*a. Amylaceous*		Sago, arrowroot.
		b. Saccharine		Sugar, figs, dates,
		c. Oleaginous		Animal and vegetable fats and oils.
GROUP 3. Nitrogenous substances, capable of producing both flesh and force.	Flesh and force producers.	*a. Albuminous*		Eggs.
		b. Fibrinous		Wheat, flesh.
		c. Caseinous		Peas, cheese.

CLASS II.—*Medicinal or Auxiliary.*

	Examples.
GROUP 1. Containing Alcohol	Beers, wines, spirits.
GROUP 2. Containing Volatile Oils	Spices and condiments, as cloves, nutmegs, pepper, horseradish, &c.
GROUP 3. Containing Acids	Apples, oranges, rhubarb stalks, vinegar.
GROUP 4. Containing Alkaloids, which act upon the nervous system as stimulants or sedatives.	Tea, coffee, cocoa, tobacco, hemp, opium.

III. BREAD AND BREAD-MAKING.

General Observations on Bread, Biscuits, and Cakes.

In addition to the receipts for Bread-making on page 110, we enter at some length here into this important subject. By means of skilful cultivation, mankind have transformed the original forms of the Cereals, poor and ill-flavoured as they perhaps were, into various fruitful and agreeable species. Classified according to their respective richness in alimentary elements, the Cereals stand thus:—Wheat and its varieties, Rye, Barley, Oats, Rice, Indian Corn. Everybody knows it is wheat flour which yields the best bread. Rye-bread is viscous, hard, less easily soluble by the gastric juice, and not so rich in nutritive power. Flour produced from barley, Indian corn, or rice, is not so readily made into bread; and the article, when made, is heavy and indigestible.

All food is called bread which is made from the flour of grains or seeds made into a dough and baked. Bread is either *vesiculated* or *unvesiculated*. The latter is called unleavened bread, and consists of such preparations of flour as are known by the name of biscuits and cakes.

Vesiculated bread is prepared in two ways, either by *fermentation* or *aëration*. In all cases fermented bread is made from the flour of wheat, or a mixture of this with the meal or flour of other grain. Oats, barley, maize, rye, will not alone make fermented bread. The meal of these grains is added to wheaten flour when they are made into bread.

In the making of fermented bread yeast is added to the flour, and the gluten of the flour is put into a state of change, and a little of it is decomposed. A small portion of the starch is formed into glucose, which is decomposed, and alcohol formed, and carbonic acid produced. The carbonic acid gas, escaping from the mass, vesiculates the bread. This process is called the *rising* of the bread. It is in this stage that the starch enters into a state of change which assists its subsequent solution in the stomach.

Bread is vesiculated, without being fermented, by two processes; 1, by the addition of substances which during their decomposition give out carbonic acid, as carbonate of soda and hydrochloric acid; 2, by making the bread with water charged with carbonic acid gas. The first is the process which makes what is known as "Unfermented Bread." The second process consists in mixing water, containing carbonic acid gas under pressure, with flour, so that when the dough is baked the escape of the carbonic acid gas vesiculates the bread. This process makes what is called "Aërated Bread."

Both forms of vesiculated Bread are adapted for general use. In certain morbid conditions of the stomach, fermented bread undergoes changes which are productive of inconvenience, and which is prevented by unfermented bread.

The ingredients used in the above three processes of making wheaten bread are as follows:—

Ingredients in a 4lb. loaf by the ordinary or fermented process:

	lb.	oz.
Flour	3	2
Water	1	1½
Yeast	0	0½
Potatoes	0	1½
Salt	0	0½

Ingredients in a 2lb. loaf by the aërated process:

	lb.	oz.
Flour	1	7
Water	0	10
Salt	0	0¼

Ingredients in two 4lb. loaves by the unfermented process :

	lb.	oz.	gr.
Flour - -	7	1	0
Carbonate of Soda	0	1	0
Muriatic acid -	0	1	53
Water - -	2½ pints.		

One pound of the crumb of bread, if digested and oxidised in the body, will produce an amount of force equal to 1,333 tons raised one foot high. The maximum of work which it will enable a man to perform is 267 tons raised one foot high. One pound of crumb of bread can produce at the maximum $1\frac{7}{10}$ oz. of dry muscle or flesh.

On examining a grain of corn from any of the numerous cereals used in the preparation of flour, such as wheat, maize, rye, barley, &c., it will be found to consist of two parts — the husk, or exterior covering, which is generally of a dark colour, and the inner or albuminous part, which is more or less white. In grinding, these two portions are separated, and the husk being blown away in the process of winnowing, the flour remains in the form of a light brown powder, consisting principally of starch and gluten. In order to render it white, it undergoes a process called "bolting." It is passed through a series of fine sieves, which separate the coarser parts, leaving behind fine white flour—the "fine firsts" of the corn dealer. The process of bolting, as just described, tends to deprive flour of its gluten, the coarser and darker portion containing much of that substance ; while the lighter part is peculiarly rich in starch. Bran contains a large proportion of gluten ; hence it will be seen why brown bread is so much more nutritious than white ; in fact, we may lay it down as a general rule, that the whiter the bread the less nourishment it contains. Magendie proved this by feeding a dog for forty days with white wheaten bread, at the end of which time he died ; while another dog, fed on brown bread made with flour mixed with bran, lived without any disturbance of his health. The "bolting" process, then, is rather injurious than beneficial in its result ; and is one of the numerous instances where fashion has chosen a wrong standard to go by. In ancient times, down to the Emperors, no bolted flour was known. In many parts of Germany the entire meal is used ; and in no part of the world are the digestive organs of the people in a better condition. In years of famine, when corn is scarce, the use of bolted flour is most culpable, for from 18 to 20 per cent. is lost in bran. Brown bread has, of late years, become very popular ; and many physicians have recommended it to invalids with weak digestions with great success. This rage for white bread has introduced adulterations of a very serious character, affecting the health of the whole community. Potatoes are added for this purpose ; but this is a comparatively harmless cheat, only reducing the nutritive property of the bread ; but bone-dust and alum are also put in, which are far from harmless.

Bread-making is a very ancient art indeed. The Assyrians, Egyptians, and Greeks, used to make bread, in which oil, with aniseed and other spices, was an element ; but this was unleavened. Every family used to prepare the bread for its own consumption, the *trade* of baking not having yet taken shape. It is said that, somewhere about the beginning of the thirtieth Olympiad, the slave of an archon, at Athens, made leavened bread by accident. He had left some wheaten dough in an earthen pan, and forgotten it ; some days afterwards he lighted upon it again, and found it turning sour. His first thought was to throw it away ; but, his master coming up, he mixed this now acescent dough with some fresh dough which he was working at. The bread thus produced, by the introduction of dough in which alcoholic fermentation had begun, was found delicious by the archon and his friends, and the slave, being summoned and catechised, told the secret. It spread all over Athens ; and everybody wanting leavened bread at once, certain persons set up as

bread-makers, or bakers. In a short time bread-baking became quite an art, and "Athenian bread" was quoted all over Greece as the best bread, just as the honey of Hymettus was celebrated as the best honey.

In our own times, and among civilized peoples, bread has become an article of food of the first necessity; and properly so, for it constitutes of itself a complete life-sustainer, the gluten, starch, and sugar which it contains representing azotized and hydro-carbonated nutrients, and combining the sustaining powers of the animal and vegetable kingdoms in one product.

Wheaten Bread.—The finest, wholesomest, and most savoury bread is made from wheaten flour. There are, of wheat, three leading qualities,—the soft, the medium, and the hard wheat; the last of which yields a kind of bread that is not so white as that made from soft wheat, but is richer in gluten, and consequently, more nutritive.

Rye Bread.—This comes next to wheaten bread; it is not so rich in gluten, but is said to keep fresh longer, and to have some laxative qualities.

Barley Bread, Indian-corn Bread, &c.—Bread made from barley, maize, oats, rice, potatoes, &c., "rises" badly, because the grains in question contain but little gluten, which makes the bread heavy, close in texture, and difficult of digestion; in fact, corn-flour has to be added before panification can take place. In countries where wheat is scarce and maize abundant, the people make the latter a chief article of sustenance, when prepared in different forms.

Bread-making.

Panification, or bread-making, consists of the following processes, in the use of Wheaten Flour. Fifty or sixty per cent. of water is added to the flour, with the addition of some leavening matter, and preferably, of yeast from malt and hops. All kinds of leavening matter have, however, been, and are still used in different parts of the world; in the East Indies, "toddy," which is a liquor that flows from the wounded cocoa-nut tree; and, in the West Indies, "dunder," or the refuse of the distillation of rum. The dough then undergoes the well-known process called *kneading*. The yeast produces fermentation, a process which may be thus described:—The dough reacting upon the leavening matter introduced, the starch of the flour is transformed into saccharine matter, the saccharine matter being afterwards changed into alcohol and carbonic acid. The dough must be well "bound," and yet allow the escape of the little bubbles of carbonic acid which accompany the fermentation, and which in their passage, cause the numerous little holes which are seen in light bread.

The yeast must be good and fresh, if the bread is to be digestible and nice. Stale yeast produces, instead of vinous fermentation, an acetous fermentation, which flavours the bread and makes it disagreeable. A poor thin yeast produces an imperfect fermentation, the result being a heavy unwholesome loaf.

When the dough is well kneaded, it is left to stand for some time, and then, as soon as it begins to swell, it is divided into loaves; after which it is again left to stand, when it once more swells up, and manifests, for the last time, the symptoms of fermentation. It is then put into the oven, where the water contained in the dough is partly evaporated, and the loaves swell up again, while a yellow crust begins to form upon the surface. When the bread is sufficiently baked, the bottom crust is hard and resonant if struck with the finger, while the crumb is elastic, and rises again after being pressed down with the finger. The bread is, in all probability, baked sufficiently if, on opening the door of the oven, you are met by a cloud of steam which quickly passes away.

One word as to the unwholesomeness of new bread and hot rolls. When bread is taken out of the oven, it is full of moisture; the starch is held together in masses, and the bread, instead of being crusted so as to ex-

pose each grain of starch to the saliva, actually prevents their digestion by being formed by the teeth into leathery, poreless masses, which lie on the stomach like so many bullets. Bread should always be at least a day old before it is eaten; and, if properly made, and kept in a *cool dry* place, ought to be perfectly soft and palatable at the end of three or four days. Hot rolls, swimming in melted butter, and new bread, ought to be carefully shunned by everybody who has the slightest respect for that much-injured individual—the stomach.

Aërated Bread.—The new process impregnates the bread, by the application of machinery, with carbonic acid gas, or fixed air. Different opinions are expressed about the bread; but it is curious to note, that, as corn is now reaped by machinery, and dough is baked by machinery, the whole process of bread-making is probably in course of undergoing changes which will emancipate both the housewife and the professional baker from a large amount of labour.

In the production of Aërated Bread, wheaten flour, water, salt, and carbonic acid gas (generated by proper machinery), are the only materials employed. We need not inform our readers that carbonic acid gas is the source of the effervescence, whether in common water coming from a depth, or in lemonade, or any aërated drink. Its action, in the new aërated bread, takes the place of fermentation in the old system of bread-making.

In the patent process, the dough is mixed in a great iron ball, inside which is a system of paddles, perpetually turning, and doing the kneading part of the business. Into this globe the flour is dropped till it is full, and then the common atmospheric air is pumped out, and the pure gas turned on. The gas is followed by the water which has been aërated for the purpose, and then begins the churning or kneading part of the business.

Of course, it is not long before we have the dough, and very "light" and nice it looks. This is caught in tins, and passed on to the floor of the oven, which is an endless floor, moving slowly through the fire. Done to a turn, the loaves emerge at the other end of the apartment,—and the Aërated Bread is made.

It may be added, that it is a good plan to change one's baker from time to time, and so secure a change in the quality of the bread that is eaten.

Mixed Breads.—Rye bread is hard of digestion, and requires longer and slower baking than wheaten bread. It is better when made with leaven of wheaten flour rather than yeast, and turns out lighter. It should not be eaten till two days old. It will keep a long time.

A good bread may be made by mixing rye-flour, wheat-flour, and rice-paste in equal proportions; also by mixing rye, wheat, and barley. In Norway, it is said that they only bake their barley-bread once a year, such is its "keeping" quality.

Indian-corn flour mixed with wheat-flour (half with half) makes a nice bread; but it is not considered very digestible, though it keeps well.

Rice cannot be made into bread, nor can potatoes; but one-third potato-flour in three-fourths wheaten flour makes a tolerably good loaf.

A very good bread, better than the ordinary sort, and of a delicious flavour, is said to be produced by adopting the following recipe:—Take ten parts of wheat-flour, five parts of potato-flour, one part of rice paste; knead together, add the yeast, and bake as usual. This is, of course, cheaper than wheaten bread.

Flour, when freshly ground, is too glutinous to make good bread, and should therefore not be used immediately, but should be kept dry for a few weeks, and stirred occasionally, until it becomes dry, and crumbles easily between the fingers.

Flour should be perfectly dry before being used for bread or cakes; if at all damp, the preparation is sure to be heavy. Before mixing it with the other ingredients, it is a good plan to place it for an hour or two before the fire, until it feels warm and dry.

Yeast from home-brewed beer is generally preferred to any other; it is very bitter, and, on that account, should be well washed, and put away until the thick mass settles. If it still continues bitter, the process should be repeated; and before being used, all the water floating at the top must be poured off. German yeast is now very much used, and should be moistened, and thoroughly mixed with the milk or water with which the bread is to be made.

The first thing required for making wholesome bread is the utmost cleanliness; the next is the soundness and sweetness of all the ingredients used for it; and, in addition to these, there must be attention and care through the whole process.

An almost certain way of spoiling dough is to leave it half-made, and to allow it to become cold before it is finished. The other most common causes of failure are using yeast which is no longer sweet, or which has been frozen, or has had hot liquid poured over it.

Too small a proportion of yeast, or insufficient time allowed for the dough to rise, will cause the bread to be heavy.

Heavy bread will also most likely be the result of making the dough very hard, and letting it become quite cold, particularly in winter.

If either the sponge or the dough be permitted to overwork itself, that is to say, if the mixing and kneading be neglected when it has reached the proper point for either, sour bread will probably be the consequence in warm weather, and bad bread in any. The goodness will also be endangered by placing it so near a fire as to make any part of it hot, instead of maintaining the gentle and equal degree of heat required for its due fermentation.

Milk or Butter.—Milk which is not perfectly sweet will not only injure the flavour of the bread, but, in sultry weather, will often cause it to be quite uneatable; yet either milk or butter, if *fresh and good*, will materially improve its quality.

To keep bread sweet and fresh, as soon as it is cold it should be put into a clean earthen pan, with a cover to it; this pan should be placed at a little distance from the ground, to allow a current of air to pass underneath. Some persons prefer keeping bread on clean wooden shelves, without being covered, that the crust may not soften. Stale bread may be freshened by warming it through in a gentle oven. Stale pastry, cakes, &c., may also be improved by this method.

The utensils required for making bread, on a moderate scale, are a kneading-trough or pan, sufficiently large that the dough may be kneaded freely without throwing the flour over the edges, and also to allow for its rising; a hair-sieve for straining yeast, and one or two strong spoons.

Yeast must always be good of its kind, and in a fitting state to produce ready and proper fermentation. Yeast of strong beer or ale produces more effect than that of milder kinds; and the fresher the yeast, the smaller the quantity will be required to raise the dough.

As a general rule, the oven for baking bread should be rather quick, and the heat so regulated as to penetrate the dough without hardening the outside. The oven-door should not be opened after the bread is put in until the dough is set, or has become firm, as the cool air admitted will have an unfavourable effect on it.

A Few Hints respecting the Making and Baking of Cakes.

Eggs should always be broken into a cup, the whites and yolks separated, and they should always be strained. Breaking the eggs thus, the bad ones may be easily rejected without spoiling the others, and so cause no waste. As eggs are used instead of yeast, they should be very thoroughly whisked they are generally sufficiently beate when thick enough to carry the dro that falls from the whisk.

Loaf Sugar should be we pounded, and then sifted through a fine sieve.

Currants should be nicely washed, picked, dried in a cloth, and then

carefully examined, that no pieces of grit or stone may be left amongst them. They should then be laid on a dish before the fire, to become thoroughly dry; as, if added damp to the other ingredients, cakes will be liable to be heavy.

Good butter should always be used in the manufacture of cakes: and if beaten to a cream, it saves much time and labour to warm, but not melt, it before baking.

Less butter and eggs are required for cakes when yeast is mixed with the other ingredients.

The heat of the oven is of great importance, especially for large cakes. If the heat be not tolerably fierce, the batter will not rise. If the oven is too quick, and there is any danger of the cake burning or catching, put a sheet of clean paper over the top. Newspaper, or paper that has been printed on, should never be used for this purpose.

To know when a cake is sufficiently baked, plunge a clean knife into the middle of it; draw it quickly out, and if it looks in the least sticky, put the cake back, and close the oven door until the cake is done.

Cakes should be kept in closed tin canisters or jars, and in a dry place. Those made with yeast do not keep so long as those made without it.

Biscuits.

Since the establishment of the large modern cracker manufactories, biscuits have been produced both cheap and wholesome in, comparatively speaking, endless variety. Their actual component parts are, perhaps, known only to the various makers; but there are several kinds of biscuits which have long been in use, that may here be advantageously described.

Biscuits belong to the class of unfermented bread, and are, perhaps, the most wholesome of that class. In cases where fermented bread does not agree with the human stomach, they may be recommended; in many instances they are considered lighter, and less liable to create acidity and flatulence. The name is derived from the French *bis cuit*, or "twice baked," because, originally, that was the mode of entirely depriving them of all moisture, to ensure their keeping; but although that process is no longer employed, the name is retained. The use of this kind of bread on land is pretty general, and some varieties are luxuries; but at sea, biscuits are articles of the first necessity.

Sea, or *Ship Biscuits*, are made of wheat-flour from which only the coarsest bran has been separated. The dough is made up as stiff as it can be worked, and is then formed into shapes, and baked in an oven; after which the biscuits are exposed in lofts over the oven until perfectly dry, to prevent them from becoming mouldy when stored.

Captains' Biscuits are made in a similar manner, but of fine flour.

III. ADULTERATION OF FOOD.

The extensive employment of various substances for the adulteration of food will lead to the perusal with interest of a list of those most commonly employed. This list we give below. The objects of adulteration seem to be threefold:

1. By the addition of articles of inferior value to increase the bulk or weight of the article adulterated.

2. To improve the colour of the article sold, either by giving the adulterated article the appearance of a better article of the same kind, or of another article altogether.

3. To increase the taste and flavour by giving flavours to substances which they do not possess, or by increasing the flavour of an article weakened by adulteration.

The following is an alphabetical arrangement of the substances more commonly used in adulteration:—

Animal Substances.

Bone Dust is obtained from the bone manufacturers, and is employed in the adulteration of pepper and sugar, and is also said to be added to flour.

Vegetable Substances.

Annatto is obtained from the seeds of the *Bixa Orellano*. It is used for dyeing, and is itself extensively adulterated. In adulteration it is used for giving a deeper colour to milk and butter, and is also employed for colouring cheese.

Bay Leaves. The produce of the bay tree, *Laurus nobilis*. They are used in the adulteration of tea.

Beans roasted. The common horse-bean is roasted, and used in the adulteration of coffee.

Burnt Sugar is made by exposing sugar to heat till the carbon is developed. It is known to those who use it for the purposes of adulteration as "Black Jack" and Caramel. It is employed to give a deep colour to vinegar, rum, brandy, and sherry, principally in deference to public taste, which demands that these liquids shall be of a dark colour, although it is no proof of their value for the purposes for which they are used.

Capsicum. The fruit of the *Capsicum annuum*, which yields Cayenne pepper, is employed in the adulteration of gin. It is also added to powdered ginger and pepper.

Cardamoms. The seeds of the various kinds of cardamom fruits are added to gin, rum, and porter.

Catechu is the extract of the *Acacia Catechu* and other plants. It contains 70 to 80 per cent. of tannic acid, and is used to adulterate tea, tobacco, and opium.

Cayenne Pepper. (See *Capsicum.*)

Chamomile Flowers. The produce of the *Anthemis nobilis*. They have a pleasant, bitter, aromatic taste, and are added to beer.

Chicory is the root of the *Cichorium Intybus*. It is used to make a beverage by decoction. It is extensively added to coffee, both for the purposes of improving its flavour and adulteration.

Cocculus Indicus is the fruit of the *Anaminta Cocculus*, and contains the poisonous principle, picrotoxin. These berries are used in the adulteration of beer and ardent spirits to increase their intoxicating power.

Coltsfoot. The leaves of *Tussilago Farfara* are employed in the adulteration of tobacco.

Coriander. The fruit of the *Coriandrum sativum* is used in adulterating beer.

Dandelion Roots. Chicory, which is employed to adulterate coffee, is itself adulterated with the roots of the *Leontodon Taraxacum*.

Gamboge is a gum resin exuded by the *Garcinia-gamboogioides*, and other plants. It is a powerful medicine, and is used as a pigment, and in colouring confectionery yellow.

Gluten. This substance is separated from wheaten flour, and is employed in adulterating tea and coffee.

Grains of Paradise. Seeds of a species of *Elettaria*. They contain an acrid oil, and are added to beer and ardent spirits to give pungency and flavour.

Lentils. The seed of the *Ervum Lens*. They are added to farinaceous foods, and also employed to adulterate drugs.

Linseed Meal. The ground seeds of Flax. Used in adulterating pepper.

Liquorice. The sweet extract of the root of *Glycyrrhiza glabra*. It is used in the adulteration of porter and stout, which it sweetens, thickens, and blackens.

Logwood. The wood of the *Hæmatoxylon Campeachianum*. It is used where a red colour is thought desirable, as in giving colour to inferior ports and clarets, bottled red fruits, &c.

Lupins roasted. The seeds of the *Lupinus* are roasted and added to coffee.

Nux Vomica. The seeds of the *Strychnos Nux Vomica* are very bitter, and contain the poisonous principle strychnine. They were formerly extensively employed to adulterate beer.

Opium. The juice of the *Papaver*

somniferum. It has been added to beer to increase its intoxicating effect.

Pea-flour has been detected as an adulterator in pepper.

Potato-starch. The starch of the Potato is very frequently used to adulterate the higher priced starches or sago, tapioca, and arrow-root. It is also added to cocoa, honey, butter, lard, and many other things.

Quassia Chips. The wood of the *Quassia excelsa*. It is intensely bitter, and is used in medicine, but is added to beer to increase its bitterness. It is also used to adulterate snuff.

Radish Seed. It is used to adulterate mustard.

Rice in the husk. It is used in China to adulterate tea.

Rice-flour. Added to powdered pepper, mustard, liquorice root, ginger, currie powder, and mixed spice.

Roasted Corn. This is wheat roasted, and is sometimes used as a substitute for coffee, and also added to it for the purpose of adulteration.

Sago Meal is a cheap form of sago. It is used to adulterate cocoa, ginger, pepper, cinnamon powder, mixed spice, and annatto.

Sawdust. Employed in the adulteration of coffee, chicory, and spices.

Starch. Wheat starch is often employed for adulteration, and has been found in sugar, honey, butter, lard, arrow-root, confectionery, spice, carraway, and liquorice powder.

Sugar. It is extensively employed as an adulterator. It is added to honey, milk, porter, gin, rum, brandy, sherry, tobacco, liquorice.

Sumach is added to snuff.

Tobacco. It is added to beer to increase its intoxicating properties.

Treacle or *Molasses.* This is an impure, uncrystallized sugar, and is added to sugar, milk, sauces, porter, sherry, and tobacco.

Turmeric. It is a pungent yellow powder, the produce of the *Curcuma longa*. It is added to substances to give a yellow colour. It is used in the adulteration of milk, mustard, cayenne, ginger, opium, rhubarb, liquorice, and confectionery.

Turnip. The root is cut up and substituted for orange peel in marmalade.

Wheat-flour. Extensively used for adulteration in cocoa, honey, potted meats, mustard, pepper, ginger, sauces, cinnamon, liquorice, and various drugs.

Mineral Substances.

Acetate of Copper or *Verdigris.* This substance is found in pickles, as the result of adding copper to them for the purpose of giving them a green colour.

Alum. This substance is added to bread for the purpose of preventing an excessive fermentation, to which the inferior kinds of flour are liable. It also makes the bread white.

Antwerp Blue. A modification of Prussian blue, used in the colouring of confectionery.

Armenian Bole. This substance has a red colour, which depends on the oxide of iron it contains. It is added to cocoa, anchovies, potted meat, and fish, and sauces, to give them a red colour. This adulteration is another instance of a substance added in deference to public taste. Many of the articles of diet to which the Armenian Bole is added, would be regarded as inferior without the colour which it produces.

Black Lead. This is Plumbago or Graphite. It is used for the purpose of giving a shiny facing to tea.

Blue John. This substance, more familiarly known as Derbyshire Spar, is a fluoride of calcium. It forms, when crushed, a white powder, which is extensively used for adulterating confectionery. It is also called "Daff."

Brickdust. The dust of both white and red bricks is used for adulterating various articles of diet, as chicory, cayenne pepper, cocoa, &c.

Brunswick Green. The true Brunswick Green is an oxychloride of copper. The false Brunswick Greens are mixtures of chromate of lead and indigo. They are used for producing various shades of green in confectionery, and are all poisonous.

Burnt Umber. An earth containing oxide of iron of a brown colour, employed for colouring confectionery, and adulterating tobacco and snuff.

Carbonate of Ammonia. This is "smelling salts." It is used by bakers, under the name of "Pop," for making their bread light.

Carbonate of Copper. It is employed for giving a green colour to green tea.

Carbonate of Lead. This compound is also employed for adulterating tea.

Chalk or *Carbonate of Lime.* It is employed for adulterating a variety of articles of food, as sugar, honey, potted meats, confectionery, liquorice, &c.

Chromate of Potash. It is said to to be used in the adulteration of tea.

Chromate of Lead. It has a yellow colour, and is employed for adulterating mustard, cheese, and snuff, and for the colouring of confectionery.

Chrome Yellow is a pale variety of chromate of lead, and is used for colouring confectionery.

Daff. (See *Blue John.*)

Dutch Pink is a mixture of a yellow colouring matter with chalk. It is used as a facing for green tea.

Emerald Green. Known also as Scheele's Green. It is an arsenite of copper. It is used in colouring confectionery, and is a most virulent poison.

Felspar. It is used in China for adulterating tea.

Fuller's Earth. This compound consists of silica and alumina, and is used in the adulteration of tobacco.

Gypsum. (See *Plaster of Paris.*)

Lime, Carbonate of. (See *Chalk.*)

Magnesia, Carbonate of. This salt, as well as the Silicate of Magnesia (Steatite), are amongst the substances used for giving a facing to green tea.

Marble is a hard carbonate of lime, and when ground has been employed to adulterate sugar.

Pipe-clay is a compound of silica and alumina, and is mixed with honey for fraudulent purposes.

Plaster of Paris or *Gypsum.* It is sulphate of lime, and when crystallized is called *Selenite.* The powder is white. It is found in tea, potted meats and fish, in powdered mustard and pepper, and in confectionery. It is also used to give port wine a crust.

Prussian Blue. A compound salt of iron and potash, used to give a facing to tea, and also to colour confectionery.

Red Lead is an oxide of lead, and is added to cocoa, cayenne, currie powder, confectionery, and snuff.

Red Ochre is a compound of oxide of iron with silicate of alumina and chalk. It has a red colour, and is used in the adulteration of cocoa, cayenne, tobacco, and snuff.

Common Salt is extensively employed as an adulterant. It is added to sugar, milk, bread, butter, cheese, lard, currie powder, sauces, gelatine, porter, tobacco, snuff.

Sulphate of Copper or *Blue Vitriol,* like verdigris, is used for giving a green colour to pickles, bottled fruits, and preserved vegetables. When powdered it is white. It acts in the same way on bread as alum, and has been used for the purpose of whitening bread.

Sulphate of Iron, or *Green Vitriol,* has been found amongst the adulterations used for the facing of green tea.

Sulphuric Acid, or *Oil of Vitriol,* is employed in the adulteration of vinegar, porter, and gin.

Venetian Red is a red ferruginous earth, and is added to articles of food, ground coffee, chicory, tea, cocoa, anchovies, potted meat and fish, cayenne, cheese, and tobacco.

White Clay. This substance is introduced into powdered mustard and confectionery.

Water. Very generally used, especially in the adulteration of milk, beer, wines, ardent spirits, sugar, tobacco, snuff, butter, &c.

Bread is frequently adulterated with *alum,* which may be detected by piercing a loaf a day old with a very hot knife, the alum attaching itself in very small particles to the blade, and giving off a peculiar smell. The fact that bread is unnaturally white, gives off a large quantity of water, and is made very brittle and dry on being toasted, points to the presence of alum, when the above-mentioned test should be applied.

IV. DOMESTIC CHEMISTRY.

Soaps, in all their varieties, consist of certain proportions of grease and alkaline salts, to which resin and scents are added in greater or lesser quantities. The common yellow soap is a compound of tallow, resin, and soda; and what is called honey soap is only yellow soap slightly refined and scented. The actual process of cleansing, and the reason why soap cleanses, is this:—soap consists of lixivial salts, alkalies, and tallow, and the greater part of the dirt on linen, clothes, &c., consists of oily perspiration, grease, and the dust which such grease attracts. In cold water these matters are insoluble; but in warm water, to which alkalies have in any way been added, the greasy dirt unites with the salts, and becomes saponaceous, and so far soluble as that it may be soon washed out. This is the secret of all *washing powders;* and in washing our hands we, in fact, perform a real chemical experiment. Many kinds of soap are prepared for the toilet; the following are among the best:—

Toilette Soap.—Take four ounces of Castile soap, slice it down into a pewter jar, and cover with alcohol; place the jar in a vessel of water at such a heat as will cause the spirit to boil, when the soap will soon dissolve; then put the jar, closely covered, in a warm place until the liquor is clarified; take off any scum that may appear on the surface, and pour it carefully from the dregs; then put it into the jar again, and place it in the vessel of hot water: distilling all the spirits that arise; dry the remaining mass in the air for a few days, when a white transparent soap will be obtained, free from impurities, and void of smell. In this way the best fancy soaps of the shops are prepared. To colour this soap, add a small quantity of any of the vegetable dyes. Then expose the jar to a gentle heat, and pour the soap out into small moulds to cool; adding a few drops of any perfume.

Lemon Soap.—Take two ounces of lemon juice; one ounce of oil of bitter almonds; one ounce of oil of tartar; and two ounces of Venice soap. Stir the mixture (cold) until the different ingredients are thoroughly blended, and it has acquired the consistency of honey; then put it up in small china boxes.

Musk Soap.—Take four ounces of dried root of mallows in fine powder, four ounces of rice powder, two ounces of oil of tar, two ounces of oil of sweet almonds, six ounces of Florentine iris root, and one drachm of essence of musk. Blend the whole thoroughly, and make it up into a stiff paste with orange flower water; then mould into round balls or cakes.

Wash-balls.—Shave thin two pounds of new white soap into about a teacupful of rose-water, then pour as much boiling water on as will soften it. Put into a brass pan a pint of sweet oil, one ounce of oil of almonds, half a pound of spermaceti, and set all over the fire till dissolved; then add the soap and half an ounce of camphor in powder, with a few drops of lavender-water, or any other scent. Boil ten minutes, then pour it into a basin, and stir it till it is thick enough to roll up into hard balls, which must then be done as soon as possible.

Windsor Soap.—Scrape some of the best white soap very thin, melt it in a stewpan over a slow fire, scent it well with oil of caraway, or other odour, and pour it into a mould. After standing three or four days in a dry place, cut it into square pieces.

Washing Powders are best bought ready made.—But much soap and labour is saved by dissolving alum and chalk in bran-water, in which the linen is to be boiled, then well rinsed out, and bleached. Soap may even be

rendered superfluous, or nearly so, in the getting up of muslins, by washing them in plain water, and then boiling them in rice-water; after which they must not be ironed, but passed through the mangle.

Washes.

Rose Vinegar for the Toilet.—Gather a quantity of rose leaves, and put them in a clean basin; then add two pennyworth of pure acetic acid, diluted with half a pint of water (cold); pour on the rose leaves, and cover well from the air. Macerate for four days; then strain off the fluid, and add a drop or two of otto of rose (or not at pleasure). Of course the above can be made in larger quanties, only observing the same proportions.

Elder Flower Water.—Pick a quantity of the flowers, put them into a jug, and pour boiling water upon them. Let the decoction stand till it is quite cold, and then strain through a piece of muslin. It is an excellent wash for the face, and removes freckles when merely produced by the summer heat. The wash can be made strong, and can be used as frequently as desired; but one or two applications a day are usually sufficient.

Gowland's Lotion.—Blanched bitter almonds, two ounces; blanched sweet almonds, one ounce; beat to a paste, add distilled water, one quart; mix well, strain, put into a bottle, add corrosive sublimate in powder, twenty grains, dissolved in two tablespoonfuls of spirit of wine, and shake well. Used to impart softness to the skin; and also as a wash for obstinate, eruptive diseases. Wet the skin with it, either by means of the corner of a napkin, or the fingers dipped into it, and then gently wipe off with a dry cloth.

Wash for the Face.—The following is a cheap and perfectly harmless wash to remove the disagreeable effects of perspiration on the face and other parts of the body:—Procure compound spirits of ammonia, and place about two tablespoonfuls in a basin of water. Washing the face, hands, and arms with this, leaves the skin clean, sweet, and fresh.

Perfumes

Are in a general way best prepared by the chemists, but a few receipts for the more useful kinds are here given.

Lavender Water.—Best English oil of lavender, four drachms; oil of cloves, half a drachm; musk, five grains; best spirits of wine, six ounces; water, one ounce. Mix the oil of lavender with a little of the spirits first, then add the other ingredients, and let it stand, being kept well corked for at least two months before it is used, shaking it frequently.

Eau de Cologne.—Take one gallon of white brandy; sage and thyme, of each one drachm; balm-mint and spear-mint, of each one ounce; calamus aromaticus, one drachm; root of angelica, one drachm; camphor, one drachm; petals of roses and violets, of each a quarter of an ounce; flowers of lavender, one eighth of an ounce; flower of orange, one drachm; wormwood, one drachm; nutmegs, cloves, cassia, lignea, mace, of each one drachm. One orange and one lemon, cut in pieces. Allow the whole to macerate in the spirit during twenty-four hours; then distil off a pint by the heat of a water bath. Add to the product, essence of lemons, of cedrat, of balm-mint, of lavender, each one drachm; neroli and essence of the seed of anthos, each one drachm; essence of jasmin and of bergamot, one drachm. Filter and preserve for use.—*Or*, strong spirits of wine, four pints; neroli, essence of cedrat, orange, citron, bergamot, and rosemary, of each twenty-four drops; lesser cardamom seeds, two drachms. Distil off three pints in a glass retort and receiver.—*Or*, spirits of wine, two pints; essence of citron and bergamot, two drachms; essence of cedrat, one drachm; essence of lavender, half a drachm; essence of orange-flowers, and tincture of ambergris, of each ten drops; tincture of musk, half a drachm; tincture of benzoin, three drachms; essence of roses, two drops. Mix, and filter.

Perfume for Handkerchiefs.—Oil of lavender, three fluid drachms; oil of bergamot, three fluid drachms;

extract of ambergris, six minims; camphor, one grain; spirits of wine, one pint. To be well shaken every day for a fortnight, and then filtered.

Perfume for Gloves.—Extract of ambergris, two minims; spirits of wine, one ounce. Rub the gloves inside with a piece of cotton impregnated with this perfume. Boots and shoes may be treated in the same manner.

Rose Water.—Take six pounds of the leaves of fresh damask roses, and as much water as will prevent burning. Distil off a gallon.

Pastiles.—Take gum arabic, two ounces; charcoal powder, five ounces; cascarilla bark, one-fourth of an ounce; saltpetre, three-fourths of an ounce. Mix with water, and make into shape.

Artificial Musk.—Rectified oil of amber, one pound; nitric acid, four parts; after some time a black matter is deposited: this, after having been well washed with water, has very much the smell of musk. True musk is adulterated with this, but still oftener with dried bullock's blood.

The Princess.—Essence of cloves and bergamot, of each three-quarters of a drachm; neroli, about a drachm; essence of musk, half an ounce; eau de rose, spirit of tuberose, and the strongest spirits of wine, of each half a pint; spirits of jasmin and cassia, of each one pint; dissolve the essences in the spirits of wine, then add the other spirits, and when well mixed, add the rose-water.

The Prince.—Ambergris, half an ounce; musk, three drachms; lump sugar, two drachms; grind together in a Wedgwood-ware mortar; add oil of cloves, ten drops; of true balsam of Peru, twenty drops; and of essence of jasmine, or tuberose, a sufficient quantity to convert it into a perfectly smooth paste; then put it into a strong bottle, with rectified spirits of wine, one quart. Observe, before adding the whole of the last, to rinse the mortar out well with it, that nothing may be lost. Lastly, digest for six or eight weeks. A very small quantity added to lavender water, eau de cologne, tooth powder, or wash balls, communicates a delicious fragrance.

Scents for Pomatums.—1. Oil of lavender, fourteen ounces; oil of cloves, one ounce; oil of marjoram, two ounces; gum benzoin, twenty ounces.—2. Essence of bergamot and essence of lemon, of each, twelve ounces; oil of cloves and oil of marjoram, of each three ounces; gum benzoin, twenty ounces.—3. Essence of bergamot, one pound; essence of lemon, eight ounces; oil of marjoram and oil of cloves, of each, two ounces; oil of oranges, one and a half ounce.—4. Essence of bergamot, one pound; essence of lemon, half a pound; oil of cloves, four ounces.—5. Essence of bergamot and essence of lemon, of each half a pound; oil of cloves, two ounces; oil of sassafras and oil of orange, of each, one ounce.—6. Essence of lemon, three ounces; essence of ambergris, four ounces; oil of cloves and oil of lavender, of each, two ounces.

Flowers for Distillation.—It is said that common salt applied to flowers will preserve them, with nearly all their characteristic odour, for several years. Thus roses and aromatic plants may be preserved to any time most convenient for distillation, or may be imported for that purpose. The process of salting roses is to take one pound of the leaves or other vegetable substance, one pound of salt, and rub them together a few minutes. The friction of the salt forces out the juice of the flower, and the whole is reduced to an aromatic paste, which is put in a cool place until wanted. When distilled, the paste is placed in a retort with twice its weight of water.

Preston Smelling Salts.—Slack lime, half an ounce; carbonate of ammoniac, half an ounce; each to be well powdered and mixed. Add, essence of bergamot, six drops; oil of cloves, two drops; essence of musk, twelve drops; otto of roses, six drops; strong liquor of ammonia. one drachm.

Almond Bloom.—Dust of Brazil-wood, one ounce; water, three pints; boil, strain; add isinglass, six drachms; cochineal, two drachms, alum, one ounce; borax, three drachms; boil again, and strain through a fine cloth.

This is a fine pink colour, used by the perfumer.

Pomatums.—Melt *very slowly* one pound of prepared suet and three ounces of white wax. Perfume with any favourite essential oil. To make this softer, add to every pound six ounces of oil of sweet almonds, and if necessary, more of the perfume. Strain and pot.

Rosemary Pomatum.—Boil in a tin saucepan, with half a pound of hog's lard, two large handfuls of flowers of rosemary, until reduced to half bulk. Strain and pot.

Almond Pomatum.—Take one pint of oil of sweet almonds; set over a slow fire, and gradually melt in it one ounce and a half of spermaceti, and two ounces of hog's lard. The heat must be barely sufficient to melt these, for a high temperature would make the oil rancid in a few days. When melted, pour into a basin; and when almost cold, stir in whatever essential oils you prefer. Strain and pot. Beef marrow, purified by being boiled in water, and the scum removed, may be used instead of hog's lard.

Hair Oils should be simple, and not contain any injurious properties.

Rose Oil.—Beat to a pulp four ounces of rose-leaves; add three-quarters of a pint of olive oil; mix well; let stand, covered, for a week; press out the oil. Repeat the process with fresh roses until the oil smells sufficiently strong; filter and use.

Queen's Oil.—Mix well one pint of oil of ben, three grains of civet, three fluid ounces of Italian oil of jasmine, and three minims of otto of roses. Strain and use. Ten minims of oil of roses may be substituted for the otto of roses, if the latter is not to be had.

Oil to Promote the Growth of the Hair.—Mix three ounces of olive oil with one drachm of oil of lavender. Mix equal parts of olive oil and spirits of rosemary, add a few drops of oil of nutmeg, and anoint the head very sparingly before going to bed. Apply frequently.

Macassar Oil.—Mix one pound of olive oil, one drachm of oil of origanum, and one and a quarter drachms of oil of rosemary. Strain and use.

Hair Washes.—The following washes may be safely applied for the removal of scurf, dandriff, &c.

Rosemary Wash.—Rosemary water, one gallon; rectified spirits of wine, one half-pint; pearlash, one ounce.

Athenian Water.—Rose water, one gallon; alcohol, one pint; sassafras-wood, one quarter pound; pearlash, one ounce. Boil the wood in the rose water in a glass vessel; then, when cold, add the pearlash and spirits. This wash is even more efficient than the rosemary preparation for cleansing the hair.

Wash to promote Curling.—Take borax, two ounces; gum arabic, one drachm; and hot water (not boiling) one quart; stir, and as soon as the ingredients are dissolved, add three tablespoonfuls of strong spirits of camphor. At night, wet the hair with this, and roll in curling paper.

Tooth Powders.—Pound together in a mortar, cream of tartar and chalk, of each half an ounce; myrrh, powdered, one drachm; orris root, powdered, half a drachm; and powdered bark, two drachms; *or*, powder and mix, red bark and Armenian bole, of each, half an ounce; powdered cinnamon and bicarbonate of soda, of each quarter of an ounce; and oil of cinnamon, one or two drops; *or*, mix together half an ounce of powdered charcoal, and one and a half ounces of prepared chalk.

Vegetable Tooth Powder.—Take fine powder of Florentine iris five parts, pure starch, three ditto, quinine two ditto, ditto hyoscyamus one ditto; sugar to the taste, and perfume the iris with otto of roses—carmine may be used to colour it. Pound in a mortar, to an impalpable powder.

Cosmetiques.—*Carmine Rouge.*—Pour two quarts of distilled water into a copper pan, and when boiling, add two ounces of the best grain cochineal, finely ground and sifted; boil for six minutes, carefully stirring, add sixty grains of fine Roman alum, in powder, boil three minutes longer set to cool. Before quite cold, decant

the clear liquor and strain through white silk into porcelain dishes; in four days decant and filter again into other dishes. The precipitate which has then fallen down is to be dried carefully in the shade.

Cold Cream.—Take oil of almonds, one pound; white wax, four ounces; melt, pour into a warm mortar; add, by degrees, rose water, one pint.

Almond Paste.—Used to soften and whiten the skin, prevent chapped hands, &c. Sweet and bitter almonds, of each two ounces; spermaceti, two drachms; oil of almonds, half an ounce. Windsor soap, half an ounce; otto of roses and oil of bergamot, of each, twelve drops; *or*, take four pounds of bitter almonds, blanched and dried; beat them in a mortar to a smooth paste with lavender water; add one pound of best honey, two ounces of oil of jasmine, half a pound of almond powder, and four ounces of fine orrice powder; beat and mix repeatedly together. This paste will keep for twelve months.

Lip Salve.—Take hog's lard, washed in rose water, half a pound, red and damask rose leaves bruised, quarter of a pound, work well together in a mortar, repeatedly for two days; then melt and strain; add to the lard the same quantity of rose leaves, let them stand for two more days; simmer in a water-bath, and strain, stirring in five or six drops of otto of roses. Pot for use. *White Lip Salve* is made of equal parts of oil of almonds, spermaceti, wax, and white sugar candy; pound, mix, and pot.

Inks

of various colours are not difficult to make, if care be taken to follow the directions here given.

Black. — Take of Aleppo galls, bruised, one pound and a half; green vitriol, twelve ounces; powdered gum arabic, eight ounces; rasped logwood, eight ounces; soft water, two and a half gallons. Boil the galls and logwood in the water till it be reduced to two gallons, then add the rest, and put the whole into a convenient vessel, stirring it several times during the day for fourteen or fifteen days, when it will be fit for use. For smaller quantities employ the same proportions.

Another Black Ink may be made of bruised galls three parts, gum and sulphate of iron one part; vinegar and water; macerate and agitate for three or four days.

Indestructible Ink. — For black, twenty-five grains of copal, in powder, dissolved in two hundred grains of oil of lavender, by gentle heat; mixed with two and a half grains of lamp black, and a half grain of indigo. Useful for labelling phials, &c., containing corrosive chemicals.

Red.—Raspings of Brazil wood quarter of a pound, infused for two or three days in vinegar. Boil one hour over a gentle fire, and filter, while hot, through paper laid in an earthenware colander. Heat again, and dissolve in it, first, half an ounce of gum arabic, and afterwards of alum and white sugar, each half an ounce.

Blue.—Chinese blue, three ounces; oxalic acid, three quarters of an ounce; gum arabic, powdered, one ounce, distilled water, six pints. Mix.

Yellow. — Boil French berries, a quarter of a pound; alum, half an ounce, in water, one pint, for half an hour, or longer; then strain, and dissolve in the hot liquor, gum arabic, half an ounce.—Gamboge, in coarse powder, half an ounce; hot water, two ounces and a half, dissolved, and when cold, add spirit, about half an ounce.

Marking Ink. — One drachm of nitrate of silver (lunar caustic), dissolve in a glass mortar, in double its weight of pure water. This forms the ink. Then dissolve one drachm of salts of tartar in an ounce of water, in another vessel; this is the liquid with which the linen must be previously wetted, then allowed to dry, and afterwards to be written on. Nitrate of silver is the basis of all marking inks.

Invisible or Sympathetic Inks.—1. Sulphate of copper and sal-ammoniac, equal parts, dissolved in water; writes colourless, but turns *yellow* when heated.—2. Onion juice, like the last.—3. A weak infusion of galls; turns *black* when moistened with weak copperas water.—4. A weak solution

of sulphate of iron; turns *blue* when moistened with a weak solution of prussiate of potash, and *black*, with infusion of galls.—5. Diluted solutions of nitrate of silver and ter-chloride of gold, darken when exposed to sunlight.—6. Aquafortis, spirits of salts, oil of vitriol, common salt or saltpetre, dissolved in a large quantity of water; turns *yellow* or *brown* when heated.—7. Solution of nitromuriate of cobalt; turns *green* when heated, and disappears again on cooling.—8. Solution of acetate of cobalt, to which a little nitre has been added; becomes *rose-coloured* when heated, and disappears on cooling.

Imitation Indian Ink.—Dissolve six parts of isinglass in twice its weight of boiling water, one part of liquorice in two parts of boiling water. Mix together while warm; then incorporate by little and little, on a stone with a spatula, one part of the finest ivory black. Heat the mixture in a water-bath till the water has evaporated to a paste. Mould into sticks or balls.

Ink for Zinc Garden Labels.—Thirty parts of verdigris, thirty of sal-ammoniac, eight of lamp-black, eight of gum-arabic, and three hundred of water; dissolve the gum in water, and pour it over the other ingredients, well mixed and reduced to powder. Write with a quill pen.

Plumbago for Zinc Labels.—Rub the part of the label to be written on with pumice-stone; then write with a carpenter's black-lead pencil; and when the writing has been exposed to the air for a few days it will become indelible. If the label gets covered with mould, it may be washed off, and the writing will reappear.

Dyeing.—The more difficult processes in dyeing are best left to the professional dyer, but many persons will be able to accomplish the following successfully:—

For Small Ribbons.—Procure your liquid dye—magenta or any other colour you prefer—of a good chemist. The ribbon must be very light—white is best—and must, before making use of the dye, be washed in strong soap and water, and afterwards rinsed in plain hot water. Then take a quart of water, nearly boiling, pour into it a few drops of the dye, stir well, put in your ribbons, and stir well during the time of dyeing.

Cotton may be Dyed Red thus:—Boil in an iron kettle one pound of camwood. This will colour three pounds of cotton cloth a light red; let it remain in the dye for a day or two, airing and heating it now and then.

To Dye Leather, Iron, Wood, &c., Red.—Dissolve four grammes of picric acid in 250 grammes of boiling water, and add, after cooling, eight grammes of ammonia. In a separate vessel, dissolve two grammes of crystallised pichsine in forty-five grammes of alcohol, and dilute with 375 grammes of hot water, then add fifty grammes of ammonia. When the red colour of the pichsine has disappeared, mix the two liquids, and immerse the articles to be dyed. For ivory or bone, add a little nitric or hydrochloric acid. On adding gelatine, it can be used as a red ink.

Black Dye. — Wool, hair, or silk may be dyed thus:—Boil the articles for two hours in a decoction of nut-galls, and afterwards keep them for two hours more in a bath composed of logwood and sulphate of iron; kept during the whole time at a scalding heat, but not boiling. During the operations, they must frequently be exposed to the air. The common proportions are five parts of galls, five of sulphate of iron, and thirty of logwood for every hundred of cloth. Sometimes a little acetate of copper (verdigris) is added to improve the colour. Silk is dyed in the same manner as wool, but the quantity of galls must be doubled, and the silk left longer in the solution.

Scarlet Dye for Wool.—Take a clean brass kettle, and heat in it sufficient water to cover the articles to be dyed. Then, to every pound weight of wool, put in half an ounce of cream of tartar, one ounce of pulverized cochineal, scald and strain, set it back, put two ounces of muriate of tin, stir well, wet your cloth in clean water, wring dry, put in the dye and let it remain

one hour, air it. This dyes a bright scarlet; and a darker colour may be obtained by dipping the articles in strong alum water.

Dyeing Feathers.—This process is too difficult, and the cost of failure so heavy—as a badly-dyed feather is often useless—that it should never be undertaken by unskilled hands.

Cleaning.—Silks, feathers, kid gloves, and many other articles of dress require cleaning from time to time, but, except in the few instances given below, it is always best and cheapest to send the articles to a regular cleaner. *Coloured silks* are cleaned with so much risk that this is imperative. *White silk* is cleaned by dissolving curd-soap in water as hot as the hand can bear, and passing the silk through and through, handling it gently, and rubbing any spots till they disappear. The silk should then be rinsed in lukewarm water, and stretched by pins to dry. *Flowered white silk* is cleaned by bread-crumbs rubbed on by the hands. *Black silk*, by some ox-gall, put into boiling water. The silk should be laid out on a table, and both sides sponged with the gall-liquor, then rinsed with clear water. A very little gum-arabic or gelatine, dissolved in a quantity of water, and passed over the wrong side of the silk, which should then be stretched out on pins to dry, will stiffen it. All these operations, however, require practice, and are not to be recommended to novices.

Feathers are cleaned by dissolving four ounces of white soap, cut small, in half a gallon of water, not quite scalding hot; beating this into a lather; then putting in the feathers, rubbing them gently with the fingers; and then washed out in very hot clean water. *Kid gloves* should not be attempted. *Silk* and *cloth gloves*, however, are easily cleaned by plain washing. *White lace veils* are boiled gently for a few minutes in curd-soap and water; then taken out and passed through warm water and soap, removing any spots, &c.; then rinse from the soap, and have ready a pan of clean cold water, in which put a small drop of liquid blue; then take a teaspoonful of starch, and pour boiling water upon it, run the veil through this, and clear it well, by clapping it between the hands; frame it or pin it out; keep the edges straight.

To Renovate Black Satin.—Take a quarter of a pound of soft soap, quarter of a pound of honey, and two glasses of gin; mix well; place the satin flat on a clean table, right side up, wet all over with a sponge and tepid water; put on a little of the mixture with a hard brush, and wash the surface of the satin with the brush and tepid water. Then merely rinse the satin in a large tub of cold water, and hang up to dry; iron on the wrong side, when damp, with a very hot iron.

Black Lace Veils are cleansed by passing them through a warm liquor of ox-gall and water, rinse in cold water, and finish as follows:—Take a small piece of glue, about the size of a bean, pour boiling water upon it; when dissolved, pass the veil through it; then clap it between your hands, and pin it out; keep the edges straight.

Straw Bonnets must be well scoured with soap and water, then rinsed in cold water, and hung in the air to dry. When dry, wash over with white of egg well beaten. Remove the wire before washing. The process of bleaching by sulphur is too tedious and troublesome to be done at home.

Another way.—Procure at the chemist's a pennyworth of "crab's-eye;" crush the lumps, and apply the powder to the straw with a piece of rag; rub in firmly and thoroughly, going over it twice, and dust it with a velvet brush when finished.

To Clean Gilt Frames, Cornices, &c.—Squeeze dry a soft sponge that has been dipped in cold water, and go, with a very quick light hand, all over the gilding, into the hollows, &c.; do not go over them more than once, and *do not* dry with a cloth.

To Clean Silver.—Wash with soap and hot water, to free from grease; mix a little fine whitening and water to a paste, and rub it on with the soft part of the hand. When dry, polish with a very soft wash-leather and

brush made for this purpose. If the silver is very dirty, use rouge instead of whitening, and wash it off with hot water and soap; dry thoroughly with a soft cloth, and polish.

To Renovate Black Lace Edgings, Insertions, &c.—Dip the laces into a little very weak gum-water; then have ready a piece of *black* book muslin (new); fold it over and under the laces, &c., and iron all together with a hot iron; remove the lace before it adheres to the muslin, when it will be found to be similar to new, having taken the black from the muslin, without any objectionable gloss. If of brown colour, add a little good black ink to the gum-water.

Starching.—Fine things are best got up thus:—Soak in cold water the night before; the next day wring them out, soap well, and pour boiling water over; rub out of that water, and soap a second time. Repeat the boiling water. When this has been done twice, rinse well in two or three waters, letting the last one have a little liquid blue in it. Let remain till your starch is made; get best starch, mix up well in a little cold water, then pour boiling water in, mixing all the time; put into a very clean saucepan, and when starch is just on the boil, stir into it a small lump of sugar, or a very little bit of wax candle, with a little blue. When your starch has boiled for a minute, strain it through a piece of linen, and then starch your things (first wringing them out of the blue water). After they are starched let them dry; and two or three hours before ironing out, they must be well damped and rolled up tight in a clean cloth. Collars and lace should always be ironed out upon a piece of blanket or cloth, used only for that purpose. If linen be *mildewed*, wet it with soft water; rub with white soap; scrape some fine chalk to powder, and rub it well into the linen; lay it out on grass in the sunshine, watching to keep it damp with soft water, repeat the process next day.

Another way.—After the articles are thoroughly washed, mix the starch with a little tepid water to a paste; then add more *warm* water, well mixed; dip the articles in this, wring out, roll up in a clean cloth, and iron at once with very hot irons.

Washing Counterpanes, &c.—A solution of one pound of mottled soap, a quarter of an ounce of potash, and one ounce of pearlash, in a pail of boiling water, will be found most useful in washing thick quilts, counterpanes, &c. Another good washing preparation is: put one ounce of saltpetre into half a pint of water, and keep it in a corked bottle; two tablespoonfuls for a pound of soap. Soak, wash, and boil as usual. This bleaches the clothes well, without injuring the fabric.

To Prevent Fur in Tea-kettles.—Keep a clean oyster-shell in the kettle.

To Prevent Irons Sticking on Starched Articles.—Well clean, and then rub the iron on *soap*; then wipe and proceed to iron. Repeat, if necessary.

Iron Moulds, to Remove.—Wet the spots with water, then lay the linen on a boiling hot-water plate, and put a little essential salt of lemons on it. As the part becomes dry, wet it again, keeping the water in the plate at the same degree of heat. When the spots disappear, wash the linen in cold water.

To Clean Cloth.—Dissolve in a pint of spring water one ounce of pearlash, and add a lemon cut in slices. Let stand two days, then strain the clear liquor into bottles. A little of this dropped on spots of grease will soon remove them, but the cloth must be washed immediately after with cold water.

Stains—*To Remove from Books, &c.*—As it is often important to remove these stains effectually, the following hints will be found useful:—Oxymuriatic acid removes perfectly stains of ink. Spirits of salt, diluted in five or six times the quantity of water, may be applied with success upon the spot, and after a minute or two washing it off with clean water. A solution of oxalic acid, citric acid, and tartaric acid is attended with the least risk, and may be applied upon the paper and plates without fear of

damage. These acids, taking out writing ink, and not touching the printing, can be safely used for restoring books where the margins have been written upon.

Grease Spots.—Scrape the surface grease off with a blunt knife; warm carefully the part stained, and apply blotting-paper; then dip a brush in rectified spirit of turpentine, heated almost to boiling, and draw it gently over both sides of the paper, which must be kept warm; repeat until the grease is entirely removed. To restore the paper to its former whiteness, dip another brush in spirits of wine, and draw it over the place which was stained, and round the edges of the spot.

Furs and Woollen Goods—*To Preserve from Moth.* — There are several standard receipts; but they are rendered useless unless the furs or clothes, when laid aside, are placed in a roomy drawer lined with cedar, and have small pieces of crude camphor sprinkled amongst them; and once a month, at least, be taken out, examined in the sun, and beaten with a cane. To preserve furs on a voyage, they must be secured from damp, and thickly covered with Cayenne pepper. The following mixtures, ground to fine powder, sewn up in little bags, and put among your clothes, are preventatives:—

1. Take one ounce each of cloves, caraway seeds, nutmeg, mace, cinnamon, and Tonquin beans; then add as much Florentine orris-root as will equal the other ingredients put together.—2. Two ounces each of coriander powder, Florentine orris powder, powdered rose-leaves, powdered sweet-scented flag root, four ounces lavender flowers, powdered, one scruple musk, one drachm powder of sandal-wood.—Turpentine sprinkled over the clothes is said to effectually preserve. They ought to be well aired before wearing. A simple method is to wrap the fur in brown paper, well sprinkled with pepper outside, and placed in a tin box.

Waterproofing. — *Cloth.* — Put into a bucket of soft water half a pound of sugar of lead, and half a pound of powdered alum; stir occasionally until clear. Then pour off into another bucket, put the cloth in and let it remain for twenty-four hours; hang up to dry without wringing. Any woollen clothes may be waterproofed by this simple method. *Calico, &c.*—Take three pints of pale linseed oil, one ounce of sugar of lead, and four ounces of white resin; the sugar of lead must be ground with a small quantity of the resin, and added to the remainder; the resin should be incorporated with the oil by means of a gentle heat. The composition may then be laid on the calico with a brush. *Boots and Shoes.*—Melt together one pint of linseed oil, eight ounces of suet, six ounces of beeswax, and one ounce of resin. Apply with a brush.

A Chinese Waterproof Composition, which has the property of making wood and other substances perfectly water-tight, consists of three parts of blood deprived of its fibrine, four of lime, and a little alum. Cardboard when covered with the composition, becomes as hard as wood.

Waterproof Packing Paper. — The paper must first be covered with a resinous liquid, then painted over with a solution of glue and soot to prevent blotches. After this is dried, the waterproof coat is applied. This is prepared with two and a half ounces of powdered shellac, dissolved in two pints of water, which is gradually brought to boil and stirred until it is perfectly dissolved, then gradually add one-third ounce of powdered borax and thoroughly mix. The liquid is then left to cool, but while still hot, any mineral colour such as lampblack, yellow ochre, &c., may be added, and when quite cold it is ready for use.

Varnishes.—A capital colourless varnish for many purposes is made thus:—Dissolve two ounces and a half of shellac in a pint of rectified spirits of wine, boil for a few minutes with five ounces of well-burnt and recently-heated animal charcoal. A small portion should then be filtered, and if not colourless, more charcoal must be added. When all colour is

removed, press the liquor through silk, and filter through thick blotting paper. This varnish is useful for drawings and prints that have been sized, and may be used on oil paintings which are thoroughly hard and dry; it brings out the colours. *Another Picture Varnish* is made of mastic, twelve ounces; Venice turpentine, two ounces and four drachms; camphor, thirty grains; pounded glass four ounces; and oil of turpentine, three and a half pints. Let the mastic dissolve with frequent agitation, then after setting for some time, pour off the clear part, and keep for use.

Mastic Varnish.—Take of gum mastic two and a half pounds; powdered glass, one and a quarter pounds; and turpentine, one gallon. Put into a bottle that will hold twice as much, and shake it at intervals, till the mastic is dissolved. Lastly, filter through blotting paper. This removes the glass, which was used to prevent the mastic sticking.

Mahogany Varnish.—Take litharge, and powdered dried sugar of lead, of each one ounce; clarified oil, nearly a gallon; sorted gum animi, two pounds; boil together till it "strings" well, then cool a little. Then a gallon to a gallon and a half of oil of turpentine should be added, mixed, and then the whole strained.

Graining to imitate Rosewood.—A good and lasting imitation is thus effected:—A concentrated solution of hypermangate of potassa is spread smoothly on the surface of the wood, and allowed to act until the desired shade is obtained. Five minutes suffice ordinarily to give a deep colour. A few trials on a spare piece of wood will indicate the proper proportions. When the action is terminated the wood is carefully washed with water, dried and then oiled and polished in the usual manner.

Graining to imitate Oak.—Take vandyke brown and chrome yellow, mixed with about one part of boiled linseed oil, and two parts turpentine; add a small quantity of litharge to cause it to dry soon. The wood is afterwards glazed. The paint used for glazing is a mixture of vandyke brown and burnt umber; or lampblack may be substituted for the latter. It is drawn lengthways along the wood with a small brush, wet with sour beer; there must be no oil used in the glazing process. When perfectly dry, varnish with oak varnish.

Roofing for Hen-houses, Dovecotes, &c.—Boil tar in an iron pot, and stir in finely-powdered charcoal. Stir constantly until the whole is reduced to the consistency of mortar. Spread this, with a broad wooden trowel, on any wooden roof of outhouses, &c., to the thickness of a quarter of an inch. It will resist heat and cold, and last for years.

Prepared Polish.—Take half a pint of best rectified spirits of wine, two drachms of shellac, and two drachms of gum-benzoin. Put into a bottle; keep in a warm place till the gum is all dissolved, shaking frequently; when cold, add two teaspoonfuls of best clear white poppy oil; shake well together, and it is fit for use. This is useful for finishing after using French polish, as it adds to the lustre and durability, as well as removes every defect, and gives the surface a brilliant appearance.

To Polish Ivory, Bone, Tortoiseshell, &c.—Take a small quantity of whiting free from grit, mix with water to the consistence of cream, and apply with a piece of soft rag, rubbing gently till polished, and finishing with dry whiting. Should any whiting remain between the teeth of combs, &c., remove by dipping the article in cold water and drying in a cloth. The above may also be used to polish and remove scratches from the finger nails.

Silvering Looking-Glasses.—Take a sheet of tin foil, and spread it upon a firm, smooth table; then rub mercury upon it with a hare's foot till the two metals incorporate. Lay the plate of glass upon it, and load it with weights, which will press out the excess of mercury that was applied to the tin foil. In a few hours the tin-foil will adhere to the glass. Two ounces of mercury are sufficient for three square feet of glass. *Glass globes*

are silvered thus: To four ounces of quicksilver, add as much tinfoil as will become barely fluid when mixed. Let the globe be clean and warm, and inject the quicksilver by means of an earthen pipe at the aperture, turning it about till it is silvered all over. Let the remainder run out, and hang the globe up. Take care not to inhale the fumes of the quicksilver.

Blacking.—The only difference between paste blacking and liquid blacking for boots and shoes is the quantity of liquid put into it. To make it—take ivory black, ground fine, four ounces; treacle, two ounces; vinegar, three-quarters of a pint; spermaceti oil, a teaspoonful. If the ingredients are of the best qualities, this blacking will be found exceedingly good. Mix the oil with the blacking first, then add the treacle, and lastly the vinegar. Oil of vitriol is sometimes used in the making of blacking; if used in small quantities it is not injurious, but it is not necessary. *Another Receipt* is: Take four ounces of ivory black, three ounces of the coarsest sugar, a tablespoonful of sweet oil, and one pint of small beer; mix them gradually together cold.—*To Polish Enamelled Leather* take milk and linseed oil—in the proportion of two-thirds of the former to one-third of the latter—make each lukewarm; mix; rub on with a sponge, having previously removed all dirt, &c. Rub this off, and keep rubbing with a soft dry cloth, until brilliant.

French Polish for Boots.—Take half a pound of logwood chips, a quarter of a pound of glue, a quarter of an ounce of indigo, pounded very fine, a quarter of an ounce of soft soap, and a quarter of an ounce of isinglass. Boil in two pints of vinegar and one of water for ten minutes after ebullition; then strain. When cold, it is fit for use. To apply, the dirt must be washed from the boots; when quite dry put the polish on the boots with a sponge.

Blacking for Harness.—Melt together four ounces of mutton suet and twelve ounces of bees' wax; add twelve ounces of sugar-candy; four ounces of soft soap dissolved in water; and two ounces of indigo finely powdered. When melted and well mixed, add half a pint of turpentine. Lay the blacking on the harness with a sponge, and polish off with a brush. This blacking is both brilliant and durable.

Disinfectants.—Perhaps the best disinfectant is *Chloralum*, which can be cheaply and easily purchased. It is highly to be recommended, as safe, sure, and powerful. *Chloride of Lime* is another excellent preventative—half a pound to five gallons of water is the quantity recommended. *Aromatic vinegar* poured upon a heated iron plate is perhaps the pleasantest, and is very good. The cheapest, and at the same time one of the most convenient and agreeable of all, is common *coffee*. Pound the well-dried *raw* bean in a mortar, and strew the powder on a moderately heated iron plate. Carry through the house a roaster containing freshly-burned coffee, and offensive smells will be removed.—A fumigating disinfectant is—common salt, three ounces; black manganese, oil of vitriol, of each one ounce; water, two ounces. Carry it in a cup through the apartments to be fumigated, and shut up for an hour or two. This is especially good in cases of sickness.

Carbolic Acid is used as a disinfectant, and Professor Gamgee has recently recommended the *deliquescent chloride of aluminium*; the latter is non-poisonous, free from any odour, prevents decomposition, absorbs noxious gases, and destroys parasites and germs.

Water may be purified by stirring into it powdered alum—a teaspoonful to three or four gallons. This will precipitate the impurities.

Sealing Wax.—Good *Bottle* wax, for sealing wines, liqueurs, &c., is made thus:—*Black.*—Black resin, six pounds and a half; bees' wax, half a pound; finely-powdered ivory black, one pound and a half. Melt together. *Red.*—Substitute Venetian red, or red lead for the ivory black. *Green.*—Green bice or powdered verdigris. *Blue.*—Indigo. *Letter* wax is made thus:—*Red.*—Shellac (very pale), four ounces; cautiously melt in a copper

pan over a charcoal fire, and when fused add Venice turpentine, one and a quarter ounce; mix, and add vermilion, three ounces; remove the pan from the fire, cool a little, weigh it into pieces, and roll them into sticks on a warm stone. *Black.*—Shellac, sixty parts; ivory black in an impalpable powder, thirty parts; Venice turpentine, twenty parts. Proceed as for red wax. *Green.*—Shellac, four parts; Venice turpentine, one part; melt gently together and add the proper colour; the best greens are powdered verdigris, bice, or Scheele's green.

Cement *for Marble, Glass, Porcelain, &c.*—Take a small portion of powdered quick-lime, and mix with cold linseed oil to the consistency of thin paste. Be sure the edges are clean, and apply with a small brush, gently pressing the pieces together. This cement is only applicable to articles that can remain undisturbed for some time, but when set, is most durable.

A simple Cement for Marble.—Clean parts to be joined, put together firmly with white lead, and let stand.

An excellent Cement for Fastening Knife Handles, &c.—Take a small quantity of Bath brick-dust, and about half the quantity of resin, reduce to a fine powder; fill the hole in the handle with the mixture; make the part of the knife, &c., to be inserted rather hot (in the fire); put it in the handle, and let it remain till set.

Glue Cement.—This cement is most useful for joining broken articles of a strong nature. Melt one pound of glue without water, or with as little as possible; when melted, add one pound of resin, and four ounces of either red lead, Venetian red, or whiting, or ivory black, according to desire.

Parchment Glue.—Boil a pound of parchment in six quarts of water, until the quantity is reduced to one quart. Then pour off from the sediment, and boil again till as thick as glue. Take out, and keep for use.

Japanese Cement.—Mix ground rice with cold water, and gently boil. This is a capital paste for paper, &c.

Glue to Unite Polished Steel.—Dissolve five or six bits of gum mastic, each the size of a large pea, in as much spirits of wine as will make it liquid. In another vessel dissolve in brandy as much isinglass, previously softened in water, as will make a two-ounce phial of strong glue, adding two small bits of gum ammoniac, which must be rubbed until dissolved. Then mix the whole with heat. Keep in a phial closely stopped. When used, set the phial in boiling water.

General Receipts.

Test for Gold and Silver.—A test often employed by jewellers, is to slightly wet the metal, and gently rub it with a piece of lunar caustic, fixed with a pointed piece of wood. If the metal be pure gold or silver, the mark will be faint; but if an inferior metal, it will turn quite black.

To make Glasses, &c., very Brilliant.—Wash in strong tepid soda-water, rinse in plain cold water, and dry with a linen cloth *without nap.*

Plants are Dried for an Herbarium thus: Gather the specimens when quite dry, and spread them out between two sheets of thick white blotting paper; take great care, in spreading out the leaves and petals on the paper, to show plainly the structure of the plant; then place the paper in a warm room under light pressure. The paper must be changed every twenty-four hours, until the plants are completely dry.

Skeleton Leaves.—Mix a tablespoonful of chloride of lime, in a liquid state, in a quart of spring water; steep the leaves in this for about four hours—strong-ribbed leaves will require a little longer,—then take out and wash well in cold water; they must then dry in the light. *A longer and more delicate process* is to steep the leaves in rain water, in an open vessel, exposed to the air and sun. Water must occasionally be added to compensate loss by evaporation. The leaves will putrify, and then their membranes will begin to open; then lay them on a clean white plate, filled with clean water, and with gentle touches take off the external membranes, separating them cautiously near the middle rib.

When there is an opening towards the latter, the whole membrane separates easily. The process requires a great deal of patience, as ample time must be given for the vegetable tissues to decay and separate.

To Dry Flowers.—Take some fine white sand; wash repeatedly till all dirt is removed, and the water remains clear; dry thoroughly, and half fill a stone flower-pot; in this, stick freshly-gathered flowers when dry, and cover the flowers over completely, so that no part of them can be seen, and take care not to injure the leaves. Place the vessel in the sun, or in a room where a fire is kept, and let it remain until the flowers are perfectly dry; then carefully remove the sand, and clean with a feather brush. The process succeeds best with single flowers.

To Dry Grass and Moss.—Proceed as for leaves. To *Dye* them:—For *pink*, get some logwood and ammonia; boil together in water; for *red*, logwood and alum; for *blue*, indigo; and all other colours that will dissolve. To keep the grass together, dip it in a weak solution of gum-water; or put some gum-water in the dye, which will answer the same purpose.

To Whiten Pianoforte Keys, &c.—Leave the instrument open to the sun and air, and the keys will rarely discolour; dust carefully, and when at all soiled wash the keys thus:—wring a wash-leather perfectly tight out of tepid water, and wipe the keys; dry with a cloth, free from nap, and polish with a silk handkerchief.

To Remove Pitch or Paint from the Hands.—Apply salad oil, or grease of any kind: well rub together before the fire till the oil and pitch are blended; then wash in warm soap and water.

The above will remove these stains from any washing fabric.

To Clean Claret Jugs, Port Decanters, &c., from Fur.—Take a little very weak aquafortis, and pour carefully into the decanter, &c., replace the stopper (a cork is better), and shake the vessel thoroughly till all the crust is removed; should this fail after a thorough trial, take strong potash or soda-water, and repeat the experiment. Afterwards rinse in cold water. Take care no spots of either acid or potash fall on the clothing.

Another way.—They may be washed with tea-leaves and strong soda-water; and then rinsed with cold water.

To Take Away Smell of Tobacco Smoke in Sitting Rooms.—While smoking, place a large basin of cold water in the room.

To Clean Sewing Machines.—When clogged with oil, procure a little benzoline (of the kind usually employed to take grease spots out of silk, &c.), and drop a small quantity into those portions of the machine generally oiled; when this is done, treadle the machine for a few minutes, and when the oil is softened wipe perfectly clean with a soft rag, and oil as usual. An apron spread over the dress is desirable during the above process.

Bird-lime, to Make.—Gather some holly in the summer, and take the middle bark; boil for six or eight hours, in water, until tender; then drain off the water, and place in a pit under ground, in layers with fern, and surround with stones. Leave to ferment for two or three weeks, until it forms a sort of mucilage, which must be pounded in a mortar, into a mass, and well rubbed between the hands in running water, until all the refuse is worked out; then place it in an earthen vessel, and leave for four or five days to ferment and purify itself. Turpentine will remove any of the lime that may stick to the hands.

Size for Prints.—Take a quarter of a pound each of pale glue and curd-soap; dissolve in three pints of hot water, with two ounces.

Feathers are Curled by the ribs being scraped with a bit of circular glass in order to render them pliant; and then by drawing the edge of a blunt knife over the filaments, they assume a curly form.

To Fix Pencil Drawings.—Take pale resin, and dissolve it in spirits of wine; lay the drawing on its face on a sheet of clean paper, and brush the back of the drawing with the solution. This penetrates through the paper, and as

the spirit evaporates, the resin is deposited as a varnish on the drawing. This will not answer with card, or anything thick; but a weak solution of isinglass may be placed in a shallow dish, and the drawing passed through it, so as to wet every part.

Hair Dye.—No method has yet been made public which answers the desired purpose, and is at the same time attended by no inconvenience. The basis of most of the powders is quicklime, and that of the lotions, nitrate of silver. The powder is thus made:—Dip six ounces of quicklime in water, and when it has fallen to pieces, pound it, and sift it through a fine sieve; then add four ounces of litharge, and two of starch, also sifted; this is made into a paste with warm water, and the hair is completely covered with it, after which an oil-skin cap is bound on, and allowed to remain the whole night. The hair is washed on the following day with soap and water, and then oiled. This gives a deep black, but with rather a purple hue; by increasing the starch, the shade will be lighter. *The hair lotion* or water is made as follows:—Pour upon half an ounce of pure silver three-quarters of an ounce of nitric acid, and expose to sharp heat to dissolve the silver; decant the liquid, and add half a pint of water; by increasing the quantity of water lighter shades are obtained. The practice of dyeing the hair is unworthy of civilization; it is a sham and a cheat, and the time will come when a woman with dyed hair will be considered as contemptible an object as a guardsman in stays.

To Darken the Hair.—Nitrate of silver (lunar caustic) is the agent commonly employed in hair dyes. A leaden comb is also recommended by some; but the introduction of silver or lead into the system through the tubes of the hair is always somewhat dangerous. A better wash for darkening the hair may be made from *a solution of the green husks of walnuts*, applied with a brush as frequently as necessary. There are no other vegetable hair dyes of any certain value.

Depilatories.—Nostrums to remove superfluous hairs from the face or neck are all more or less dangerous, and should only be used under the advice of a surgeon. The following, are, however, the least harmful:—

To Remove Superfluous Hair.—Saturate the skin with olive oil, and let remain one hour; then wipe it off and apply the following mixture with a brush:—One ounce finely powdered quicklime, one drachm powdered orpiment, mixed with white of egg.

Miscellaneous.

Washing Coloured Linens, Muslins, &c.—They should not be soaked or soaped over night. When ready for washing, put into *cold* water and wash very speedily; if very dirty, the water may be lukewarm, and no more. Do not use the smallest particle of soda. The best soap is common yellow. The soap should not be allowed to remain any time on, and the linen must not lie in the water any length of time. One article should be washed at a time, and immediately rinsed, the others remaining in a dry state by the side of the tub. The rinsing water should be cold, soft water, with salt in it. When an article is taken from the rinsing tub, it should be rung very gently. Silk pocket-handkerchiefs require to be washed by themselves. Handkerchiefs containing snuff should be put to soak by themselves in lukewarm water. Three hours after, they should be rinsed out and put to soak with the others in cold water for a couple of hours. They should then be washed out in lukewarm water, being soaped as they are washed. If all the stains are not out, they must be washed through a second water. When finished, they should be rinsed in cold, soft water, with salt. They may be rinsed altogether, thrown into a dry tub, and from thence into the rinsing tub with the others.

To Wash Blankets.—Cut a pound of yellow soap into thin slices, and place them, or as much as will be required, in the copper with water and boil. Pour into a tub and add cold water to the required warmth, put in blanket and wash well with hand or dolly; re-

neat, adding a little blue with the hot water; wring tight and shake well.

To Wash Damask Curtains.—Shake the dust off, lay in cold water to free from smoke, use boiled soap as in blankets, and wash in tepid water, then rinse in cold water with a handful of salt thrown into it.

To Wash Carpets. — Sweep the carpet thoroughly, take a large pail of hot water, coloured with blue, if any white in it; wet about half a yard of the carpet, rub it well with a piece of soap, then use a hard brush, wash off with clean flannel, and dry with a coarse cloth. Repeat on other parts. Do not wet the carpet too much, and have the water frequently changed.

To Clean Ermine Fur.—Take out the linings and stuffings, lay the fur flat on a table covered with a clean cloth. Take a piece of fine whiting and rub it into the fur; shake thoroughly, and repeat again till clean. Rub well with a clean towel.

To Renovate Black Clothes.—Carefully clean from dust; take out any spots of grease with turpentine, the smell of which may be destroyed by essence of lemon. Boil a few chips of logwood in a little water, and sponge the cloth with it; *or*, make a strong infusion of galls, and a solution of copperas and green vitriol, or sulphate of iron, and either moisten the parts separately, or mix the liquids in a phial.

To Cleanse Glass Vessels in which Petroleum has been kept.—Wash the vessel with thin milk of lime, which forms an emulsion with the petroleum, and removes every trace of it; wash a second time with milk of lime and a small quantity of chloride of lime, and the smell will be completely removed. If the milk of lime be used warm, instead of cold, the operation is rendered much shorter.

To Render Wood, Cloth, Paper, &c., incombustible. —Use silicate of potassium.

Paint to Resist the Action of the Air, Sun and Water.—Use silicate of potassium and zinc white.

To Engrave on Glass.—This process requires great care. Cover one side of a flat piece of glass, after having made it perfectly clean, with bees'-wax, then draw the design with some sharp-pointed instrument, taking care that every stroke cuts completely through the wax. Make a border of wax all round the glass; take finely-powdered fluate of lime (flour spar), strew evenly over the plate and then gently pour upon it, not to displace the powder, sulphuric acid, diluted with thrice its weight of water, to cover it. Let remain for three hours, then remove; clean the glass with oil of turpentine. The figures which were traced through the wax will be found engraved on the glass, while the parts which the wax covered will be uncorroded. Be very careful in the management of the acid, as if too strong it will eat through the glass.

Fixing Glass in Stone Windows.—Portland cement, though often used, is not so good as a mixture of Bath stone dust and linseed oil, made up like putty.

To Colour Glass or Porcelain Black. —Use Iridium.

The "Furry" Deposit in Tea-Kettles may be removed by a very weak solution of muriatic, nitric, or acetic acid, which will immediately dissolve it with effervescence. Care must be taken to remove the acid as soon as the deposit is dissolved, or it would attack the iron. After the operation boil water in the kettle some days before using.

Razor Paste. — Mix together, and rub over the strop, two parts of emery, reduced to an impalpable powder, and one part of spermaceti ointment.

Plate Powder.—Mix together four ounces of prepared chalk, and two ounces each of Polisher's putty and burnt hartshorn.

Asphalte Pavement for garden walks, floors, for sheds, &c., is thus laid down:—The place must be levelled; then put on it a coat of tar, and sift some road sand or coal ashes all over it very thickly; when dry repeat the operation four times. You will then have a dry, hard path.

Plant-Sticks, &c., may be preserved

BULL DOG.

DALMATIAN DOG.

ESQUIMAUX DOG.

FIELD SPANIEL.

MOUNT SAINT BERNARD DOG.

For the Management of Dogs, see p. 286.

by dipping the portions which are inserted in the ground two or three times in hot tar. Hot asphalte is better, but both are excellent preservatives. *Another way.* — Char the ends in the fire till black.

To Render Wood Uninflamable and to Preserve it Underground. — Place the wood unplaned for twenty-four hours in a liquid composed of one part of concentrated silicate of potassa and three of pure water. After being removed and dried for several days, soak it again in this liquid, and after being again dried, paint over with a mixture of part of cement, and four parts of the above liquid; when the first coat of this paint is dry, repaint twice.

To Prevent Rust on Iron.—Immerse the iron for a few minutes in a solution of carbonate of potash or soda.

To Preserve Iron and Steel from Atmospheric Influences. — Coat with melted sulphur, the sulphur chills and sets into a hard, thin, protecting covering.

A Preservation against Lead Poisoning.—The use of milk at meals preserves those employed in lead works from any symptoms of lead disease. To preserve the purity of water passing through leaden pipes, insert an internal lining of block tin.

Drying of Wood.—The drying of all kinds of timber by artificial means should be effected slowly, and the temperature moderate to begin with, for small pieces, such as are used for joiners and furniture-makers, place in dry sand and heat to 100°—the sand acts as an absorber of the moisture as well as a diffuser of the heat.

Danger from Union of Metals.—The pipes leading to a leaden cistern should be of lead; if of iron and connected with an iron boiler, a kind of galvanic battery is formed, which will gradually destroy the boiler.

To Detect Logwood in Wine.—Take a strip of good filtering paper, and place it in an aqueous solution of neutral acetate of copper and then dry. Dip the paper into the wine, and the adhering drops should be made to run backwards and forwards on the paper, then quickly but carefully dry. If the wine be free from logwood, the colour shown will be grey or rose red greyish, but if logwood is present the tinge will be sky-blue.

To Detect Arsenic.—Mix the arsenious liquid with hydrochloric acid until fumes appear; chloride of tin is then added, which produces a basic precipitate, containing the greater part of the arsenic as metal, mixed with oxide of tin.

Imperishable Putty.—Mix together ten pounds of whiting and one pound of white lead, with the necessary quantity of boiled linseed oil, adding a wine-glassful of best sweet oil. This last prevents the white lead from hardening.

To Preserve Wood.—Mix one pound of chloride of zinc with five gallons of water. Steep the wood in this solution.

Volunteers' Belts are glazed by a beaten white of egg, adding to an equal quantity of cold water, and a little sugar candy.

To Bleach Hair.—Wash well in strong warm pearlash water; spread the hair upon the grass for several days, that it may be alternately exposed to dew and sun. Light hair will bleach this way. Dark hair should be sent to a professed bleacher, as many of the means used destroy the gloss.

Light Mahogany — to Darken.—If in repairing old furniture lighter pieces of wood are introduced, they may be darkened by washing with a weak solution of quick lime.

Green Paint.—An economical and capital paint for summer houses, &c., is made thus:—Take four pounds of Roman vitriol, and pour on it boiling water; when dissolved add two pounds of pearlash, and stir the mixture well with a stick until the effervescence ceases; then add a quarter of a pound of pulverized yellow arsenic, and stir the whole together.

Inodorous Paint. — A composition for mixing with lead and other colours to form a paint in lieu of linseed oil, turpentine, and the usual driers, has lately been patented. The material

consists of methylated spirit, shellac, and castor-oil; it dries very quickly and is without smell.

Imitation Ivory.—Make into a paste isinglass, brandy, and powdered egg-shells. Colour as you desire, cast it, warm, into an oiled mould; in a few hours it will be firmly set.

Gun Cotton Ivory. — Camphor, triturated with gun cotton, and subjected to hydraulic pressure, produces a hard white substance, which, if coated with a compound of gun cotton and castor oil, resembles ivory, to which for many purposes it is superior.

Fire-Proof Stucco.—The following which is a useful and comparatively inexpensive mixture, has been tried and found to answer. Take moist gravelly earth, (previously washed), and make it into stucco with this composition; mix well one part of common clay with two parts of pearlash and five parts of water.

Hot Water Pipes—to stop leakage in. —Mix iron borings and filings with vinegar and a little sulphuric acid; let stand till it becomes paste. Dry the pipe, fill in the cracks with this mixture, and keep the pipe dry until hard. This cement lasts a long time.

Alabaster Ornaments—to clean. — When these have become discoloured, they may be cleansed by the fumes of chlorine, applied for a short time, and afterwards being bleached in the sun, and then being sprinkled over with a diluted solution of chlorinated soda, commonly called chloride of soda. Care must be taken not to expose the alabaster too long to the action of the chlorine, or its colour will be injured; and the fumes, being dangerous, must not be inhaled.

Durable Paste.—Take common flour paste, rather thick, add a little brown sugar and corrosive sublimate, which will prevent fermentation, and a few drops of oil of lavender, which will prevent mouldiness. When this paste dries it resembles horn, and may be used again by adding water. This paste will keep well for years if kept in a covered pot, and is always ready for use.

Transfer Papers.—A useful transfer paper may be made for copying monumental inscriptions, brasses, &c., by rubbing a mixture of black-lead and soap over silver paper.

To Preserve Bright Steel from Rusting.—Smear it over with hot melted fresh mutton suet; before it cools and hardens, have some powdered unslacked lime in a muslin bag, and dust it over the hot suet which covers the steel.

Easily-made Storm-Glass. — Take two drachms of camphor, half drachm of pure nitrate of potash (nitre or saltpetre), and half drachm of muriate of ammonia (sal-ammoniac), and pound them together in a mortar, until they are thoroughly pulverized. The operation may be assisted by adding a few drops of alcohol. When well powdered, the mixture is to be dissolved in about two ounces of alcohol, and put into a tall phial, or into a glass tube of about ten inches in height and three-fourths of an inch in diameter, the mouth of which is to be covered with a bit of bladder or the like, perforated with a pin. The instrument is then complete. It gives the following *indications*:—If the atmosphere be dry and the weather promising to be fine, all the solid part of the composition which appears in the glass will be closely collected at the bottom, and the liquor above will be quite clear; but on the approach to a change to rain, the solid matter will appear gradually to rise, and small crystalline stars will be observed to float about in the liquid, which, however, will remain otherwise pellucid. On the approach of winds, flocks of the composition, apparently in the form of a leaf, will appear on the surface of the liquid, which in this case will seem thick and in a state of fermentation. These indications often begin to exhibit themselves twenty-four hours before the actual breaking forth of the storm. The quarter of the compass from which the wind blows will always be indicated by the solid particles lying more closely to the opposite side of the glass. During the winter, the

composition is rendered white by a multitude of small white stars.

Home Made Barometer. — Fill a large, wide-mouthed pickle bottle with cold water to within two or three inches of the top. Then take a long-necked flask, and plunge the neck into the bottle as far as it will go, and the barometer is made. In fine weather the water will rise into the neck of the flask even higher than the pickle bottle. In wet and windy weather it will fall to within an inch of the mouth of the flask. Before a heavy gale of wind the water will probably leave the flask altogether hours before the gale comes to its height.

Galvanic Battery. — Take a large glass or stone jar, with the mouth cut off evenly, and put another cylindrical vessel, of porous porcelain inside it; fill the vessel with diluted sulphuric acid, and the space between the two with sulphate of copper, a solution of the salt of gold, silver, &c., according to what you want to plate the article; put a slip of zinc in the sulphuric acid, and attach a copper wire to it, and the other end of the wire to the medal or article you wish to plate, and immerse that in the other solution. Your battery is now complete. A little grease rubbed on any part of the medal will prevent the solution plating the greased portion.

Magic Lantern Slides are easily painted by observing these few directions:—Draw on paper the subject you intend to paint, and fix it at each end to the glass; trace the outlines of the design with a fine hair pencil in strong tint in their proper colours, and when these are dry, fill up in their proper tints; shade with black, bistre, and vandyke brown, as you find convenient. The colours used are transparent, lake, sap-green, Prussia blue, distilled verdigris, gamboge, &c., ground in oil, and tempered with mastic varnish. Copal varnish may be used in the dark shades.

Maps are best washed in with the following colours: Yellow; gamboge dissolved in water.—Red; Brazil dust steeped in vinegar, and alum added; or, cochineal steeped in water, strained and gum arabic added.—Blue; Saxon blue diluted with water. — Green; distilled verdigris dissolved in water, and gum added; or, sap-green dissolved in water, and alum added.

V. DOMESTIC MEDICINE.

What to do.—In these pages will be found the proper course to pursue in all common ailments, accidents, wounds, aches, and pains. These instructions are not intended to supersede but to assist the doctor. Under each head will be found the easiest and most effectual remedies for various disorders and accidents—always, when so directed, under the advice of the doctor, whose will must be law. The symptoms of disease, poisoning, fits, &c., are all given, and the treatment necessary until the doctor's arrival.

Fainting.—Lay the patient flat on the back, and *do not raise the head at all*, but allow it to remain on the same level as the rest of the body. Loosen collar, and anything tight about the neck and body; apply smelling salts to the nose, and hot flannels to the bosom, heart, and armpits; dash cold water in the face; when able to swallow give a little sal-volatile (say twenty drops) in water. *The great point is to keep the head low.*

Hysterics.—Lay the patient flat on the back, and keep the head low. Apply smelling salts and cold water as above. Give a little brandy and hot water, and warm the feet. If these fits recur often, medical advice must be sought. Hysterical fits are distinguished by the laughing, screaming and crying which accompany them.

Epilepsy.—Boys are most subject to these fits. There is usually froth from the mouth, and great agitation of the body, the hands being tightly clenched. Lay the patient flat on his back, and *raise the head a little.* Loosen his shirt-collar, braces, waistcoat, &c., and hold him firmly or he will do harm to himself; splash the face well with cold water, and use smelling salts. To prevent the tongue being bitten insert the handle of a tooth-brush, or some such article, right across the mouth between the teeth, and as far back as possible. Keep the patient quiet, and he will usually come round in a short time. If not the doctor must be sent for. Fits of epilepsy are recurrent, and usually leave the person in his customary state; but sometimes a considerable degree of stupor remains behind, particularly where the disease is of frequent recurrence.

Apoplexy.—A man in an apoplectic state breathes very hard, like snoring, his face, head and eyes look swollen, and the body is more or less paralysed. Put him to bed and send for the doctor *instantly.* Until he comes *keep the head well raised*, remove the collar, &c., and let him be kept easy and cool; apply hot mustard poultices to the soles of the feet and the thighs—inside. The patient must be bled freely from the arm as directed (*see* blood-letting), and have rags dipped in vinegar and water, or even plain cold water applied to the head. The bowels must be opened, but this is difficult, and had better be left to the doctor. If, however, he does not come quickly, mix eight or ten grains of calomel with two drops of castor-oil, and put on the tongue, as far back as you can.

On Fits generally.—Let the above treatment be promptly attended to, and in the case of apoplexy—which is distinguished by the snoring, the paralysis of the body, the swollen head, &c.—send for the doctor with all possible speed, as the patient may die in a few minutes. Simple fainting fits—at the sight of blood, of fright, a shock, &c.—need occasion little alarm, as they seldom last long. In all serious cases give the patient air, send crying children or servants out of the room, keep cool and collected, for remember on your presence of mind the patient's life may depend.

Blood-letting.—Only bleed in cases of

the greatest emergency, and when the doctor is delayed. Bind a handkerchief round the right arm, three or four inches above the elbow. Then let the hand be opened and shut; when the veins swell you will see one in the middle of the lower arm which has two branches, and the outer branch is the best to bleed from; hold the lancet (a sharp pen-knife will do) between the thumb and fore-finger, cut the vein slanting and lengthways, not deep. When the pulse subsides enough blood has been taken away. Then remove the bandage, put the left thumb on the cut, and when the bleeding stops put on a pad of lint, and bind it firmly with a handkerchief.

Bruises. — One of the very best remedies for all kinds of bruises is tincture of arnica, diluted in from three to four times its bulk of water, and rubbed in carefully. Vinegar and water, Eau de Cologne, brandy, soap liniment or opodeldoc are all excellent remedies if gently rubbed in. In more severe cases, and where the accident is near an important part, as the eye or any of the joints, leeches must be employed, repeating them according to circumstances. It is unwise, however, to bleed unless under the advice of a medical man. If considerable fever be present, bleeding from the arm, purgatives, and low diet, may become necessary. A bread and water poultice and rest will generally do all that is necessary, after the application of the arnica. In the last stage, where there is merely a want of tone and swelling, friction should be employed, either simply or with any common liniment. Wearing a bandage, pumping cold water on the part, succeeded by warm friction, a saturated solution of common salt in water, have each been found successful. A capital liniment is compound soap liniment, one ounce and a half, laudanum, half an ounce; mix and rub in.

Wounds.—Simple, slight cuts only need that the edges of the wound should be placed carefully together—first ascertaining that no foreign matters, such as glass, splinters, dirt, &c., are in the cut—and then fastened tightly with diachylon (white sticking) plaister. More serious wounds should be promptly treated by the doctor, but until his arrival a weak solution of tincture of arnica (one part to twelve parts of water) may safely be used, bathing the wound well. This is an excellent remedy. If an important part be severely wounded, such as any part of the arms, legs, thighs, &c., attended with a profuse discharge of blood, compression, until a surgeon arrives, should be made thus: viz., tie a handkerchief or bandage below the wound, loosely round the limb, put a strong piece of stick, about a foot long, under the handkerchief, and twist it round and round until the bandage is tight enough to check the discharge.

Scratches and Small Cuts should be washed clean in warm water, bathed in a weak solution of tincture of arnica, and strapped up with plaister, or if free from dirt simply bandage with a clean rag. If there is much inflammation apply a bread and water poultice.

Sprains. — For sprained wrist or ancle make two flannel bags, each a foot long by six inches wide, fill them with bran and plunge into boiling water till thoroughly saturated, then squeeze almost dry and apply one, as hot as he can bear it, to the patient's ancle or wrist. Continue this, applying one as soon as the other gets cool, for *many* hours; then apply a stimulating embrocation, and bandage well up. All strains are assisted in their cure by bandaging, but they should not be applied until hot fomentations, followed by the application of the embrocation with plenty of friction before a fire. This is a great pedestrian's advice. Sprained knees can be treated in the same way.

Dislocations and Fractures.—The danger of interfering with these matters is so great that unless an experienced and clever surgeon can be *immediately* obtained, the patient should be gently placed in a cab, and driven quickly to the nearest hospital,

or, if none near, surgeon's house, keeping the limb as nearly as possible in its natural position.

Bites and Stings.—Snake bites are so uncommon in this country that we will simply say that sucking the wound, cutting out the affected parts, and cauterising are necessary. Ammonia is said to be an effectual remedy. Wasps, gnats, bees, &c., sting very frequently, but their victims are easily cured, unless the part attacked be the eye or throat. The sting must be taken out with a needle, and then the place squeezed tightly, sucked, and a liniment of powdered chalk and olive oil in a paste applied to the part. When the sting is inside the mouth or throat, leeches must be at once applied, a strong gargle of salt and water used, and the doctor sent for. For the bites of dogs take *immediately* warm vinegar or tepid water, and wash the wound very clean; then dry it, and pour upon the wound a few drops of muriatic acid. Mineral acids attack the poison of the saliva, and its evil effect is partially neutralized. This treatment, however, good as it is, is seldom successful, there being no antidote to the bite of a mad dog. The doctor's aid must be sought instantly. Cat bites and scratches may be safely treated with a solution of tincture of arnica freely and perseveringly used.

Falls where the Patient is Stunned.—Undress the patient, put him into a warmed bed, send for the doctor, and let the patient remain untouched until he arrives, *even if it be six hours.* Nothing but quiet and moderate warmth will do any good.

Burns and Scalds.—For all simple burns coat the place well with common flour, or, which is better, powdered whiting, or scraped potato, or cotton-wool with flour thickly dusted over it, or gum water, or sweet oil and bind a cloth over. Even plunging in cold water will do good, as it answers the first necessity,—keeping the injury from the air. Soap scraped up fine, laid on, and bound over, is also excellent. The body should be kept cool, and the bowels rather open. If the burn or scald be more serious, and little bladders appear over the surface, spread on linen or lint a liniment made of equal proportions of linseed oil and lime-water well mixed; or apply a warm linseed meal poultice. As severe burns and scalds are attended with great pain and irritability, and often with considerable danger, a doctor should be promptly sent for, any of these remedies being applied meanwhile.

Accidental Poisoning.—Send for the doctor instantly, and until he comes observe the following. If the thing swallowed causes an intense burning in the throat it is probably a "corrosive" poison, that is, it destroys the textures with which it comes in contact. Make the patient swallow a glass of sweet or of sperm oil, or melted butter, or lard, whichever is most convenient to use, and then, within five minutes, half a pint of warm water in which has been stirred a teaspoonful each of table mustard and salt. When the poison taken is known to be nitric acid (aqua fortis), sulphuric acid (oil of vitriol), or muriatic acid (spirit of salt), *emetics must* ON NO ACCOUNT *be given.* A mixture of magnesia, powdered chalk, or whiting, or plaster from the ceiling, and milk and water, made to a paste, and freely given; or soap and water. When a poison has been swallowed which has no special effect on the throat, but causes sickness at the stomach, faintness, drowsiness, stupor, or any other strikingly unusual or unnatural feeling, let him swallow *instantly* the whites of a dozen eggs in a quart of water, a glassful every three minutes. and, as quickly as can be prepared, half a pint of coffee made thus: on a teacupful of ground coffee pour half a pint of boiling water. Stir into it the white of an egg. After allowing it to rest a minute or two, pour into a cold cup, and when not too hot let him drink it. Then within five minutes pour a glass of water on a tablespoonful each of ground mustard and table salt, stir, and let him drink it instantly. The egg in the stomach more promptly neutralizes a larger number of poisons than any other

known substance ; the coffee acts thus on the next largest number, while the mixture relieves the stomach of the whole of its contents by vomiting. These things, too, are always ready and at hand.

In the case of poisoning by *laudanum* (opium), the symptoms are very like apoplexy, the patient rapidly becoming insensible, and snoring heavily. The first care is to empty the stomach. If sulphate of zinc can be procured, from twenty to thirty grains dissolved in water are to be given immediately. Failing this, a mustard emetic must be administered, and the back of the throat tickled with a feather. Vomiting must be encouraged by copious draughts of tepid water. During this time let the patient be walked up and down between two persons *constantly and without rest* for two or three hours. When *prussic acid* (which is known by its smell, resembling bitter almonds) has been swallowed there is little hope, the action of this poison is so swift and deadly. Lay the patient on his stomach, and dash on to his back large quantities of cold water, putting him under a pump if convenient. *Arsenic* is almost as deadly. Give mustard and water, and try hard to induce the patient to vomit. In all cases of poisonous food give mustard and water, and afterwards castor oil (two tablespoonfuls). *In all cases send for the doctor instantly,* and his stomach-pump, useless in your hands, will work wonders. Remember if poison is allowed to remain in the system, there is no hope of recovery.

Warts.—Touch lightly every other day with lunar caustic ; or, touch them, twice a day, with a very small drop of strong acetic acid ; or, rub them every night with blue-stone. Either of these remedies, if persevered in, will effect a certain cure. Great care must be exercised in applying them, as if the acetic acid or lunar caustic touch any other part it will cause inflammation and pain.

Whitlows. — Poultice with linseed meal ; do not lance unless very slow in ripening. Heal with ointment.

Corns and Bunions.—As these are usually caused by wearing short, tight, or high-heeled boots, the preventative is to wear easy ones with moderate heels, and made of soft leather, cloth, or oiled canvass. A bit of soft leather, spread thickly with soap plaster, and with a hole in the middle for the corn, will give relief. A good remedy is to take the skin of a hot boiled potatoe, and put the innerside of it to the corn, leave it on for twelve hours, and the corn will be much better. The above has been tried by many persons, and found to give great relief.—Another method is to rub the corn with pumice stone as long as it can be endured, and repeat until it disappears. For a bunion, if not inflamed, the best remedy is to put upon it first a piece of diachylon plaster, and upon that a piece of leather, with a hole the size of the bunion cut in it. If inflamed, it must be poulticed ; if this does not succeed and matter should form, it must be treated as a boil, and the matter let out with a needle or lancet. The following ointment is for an inflamed bunion:—Iodine, twelve grains, lard, or spermaceti ointment, half an ounce. Gently rub in a little piece two or three times a day.

Blistered Feet.—Bathe them on going to bed with strong salt and water, and if tender also add a little vinegar and pounded alum. If the blisters are large, run a stocking needle through them, and leave a bit of the worsted in the blister. If you walk much, use a thick, solid, well-fitting boot, and lamb's wool socks, spreading soft soap on the inside of the foot of the sock, and continue the bathing.

Chilblains.—The following may be applied night and morning:—Tincture of cantharides, two drachms ; soap liniment, ten drachms ; *or*, this ointment : calomel and camphor, of each, two drachms ; spermaceti ointment, eight drachms ; oil of turpentine, four drachms. Mix well. Apply, by gentle friction, two or three times daily. Snow rubbed in is said to be a remedy;

as is also two ounces of sal ammoniac in a pint of water. When there is any appearance of ulceration, get medical advice.

Bleeding at the Nose.—As this is a natural effort to relieve an overload of blood, a moderate discharge should not be too abruptly checked. In the spring of the year drowsiness, pains in the head, &c., are often relieved by a slight loss of blood; but when bleeding is very profuse and frequent, it should be stopped. Wet cloths, wrung out of cold water, applied suddenly to the back, forehead and hands, or a key put down the back inside the clothes, will often stop the bleeding. If not, put a bit of lint or wood dipped in cold water, or a weak solution of alum and water should be tried. Children subject to bleeding at the nose, and weakness ensuing, should have plenty of open air exercise, and sea-bathing—an excellent substitute for which is Tidman's sea-salt. A course of steel tonic is also recommended.

Perspiration.—Where this is unpleasantly profuse, a good wash in cold spring water, rub with a rough towel till the blood tingles to the skin; *or*, put two tablespoonfuls of compound spirits of ammonia into a basin of cold water and wash with that. This leaves the skin quite clean, sweet and fresh, and is perfectly harmless.

Habitual Intemperance—to Check.—The following is a preparation which acts as a tonic and a stimulant, and so supplies, in a measure, the place of the accustomed dram. It should be taken at the times and in the quantities at which the drams were usually drunk (say twice a day). Mix four grains of sulphate of iron, one drachm of spirit of nutmeg, and eleven drachms of peppermint water.

Stammering.—Read aloud with the teeth closed, two or three hours a day for three months. This is infallible. Another easy and effectual cure is—tap with the finger at every syllable pronounced. Dr. Warren says this, if persevered in, will cure the most inveterate stammerer.

Knock-Knees.—Three times a day, for an hour each time, tie the ancles tightly together, and put a small book between the knees. Increase the thickness of the book at each trial. Every night in bed tie the knees together and cross the legs. Persevere in this, and the pain will soon pass away.

Substances in the Throat.—Swallow the whites of one or two eggs, and then a large mouthful of crumb of new bread. This will generally carry down any such substances as fish-bones, pins, &c., or a large draught of water, or an emetic will sometimes answer the purpose.

Substances in the Ear.—*Force must never be used* to extract anything from the ear. The best and safest plan is to inject lukewarm water rather forcibly by means of a large syringe.—This will rarely be found to fail. Should the substance or the ear have become swollen, a little sweet oil must be poured in, and left there till the next day, when syringing may be again used.

Styes are little abscesses which form on the edge of the eyelid. If very painful and inflamed, bathe well with warm water, and put on a small bread or linseed meal poultice; take an aperient; rub the stye with the edge of your nail or a ring, and when it has burst smear the edge of the eyelid with an *ointment* made thus:—Take of spermaceti, six drachms; white wax, two drachms; olive oil, three ounces. Melt together over a slow fire, and stir constantly until cold.

Headache arises from a variety of causes—long fasting, study, excess in eating or drinking, improper food, want of exercise, indigestion, mental depression, sedentary occupations, and anxiety of mind. The true cure of headache is in fact to remove the cause. What is called *sick headache*, arising from biliousness or some error of diet is accompanied by acute or dull pain over the temples, throbbing and incapacity for mental exertion. A draught of effervescing magnesia, a wet napkin round the head, and rest for a few hours will usually accomplish a cure. Headache from indigestion will be removed by an antibilious pill and a cup of strong tea. When the headache is accompanied by ten-

derness of the scalp and acute pain on pressure, these symptoms indicate a disturbance of the system, for which the aid of the doctor should be immediately sought. Exercise in the open air, cold water splashed over the face and head, and in fact any means which entirely reverse the previous course of living will be found effective in removing headache. Proper diet, cheerfulness of mind, and a regular habit of body are almost always unfailing restoratives. More headaches occur from neglect of the digestive organs and irregularity in the bodily functions than from any other cause. Remove the cause and the effects will disappear. For ordinary headaches, arising from too great an attention to business or study, strong ammonia, smelling salts, cold water on the head, and from ten to fifteen drops of chlorodyne in a wineglass of water, will generally be found an effective cure. Headaches arising from functional disorders must never be trifled with. They are often the precursors of rheumatism, epilepsy, or paralysis, and if not attended to in time, or yield to the simple remedies above mentioned, must be medically treated.

Tooth-ache.—The only real and lasting cure for toothache is the extraction of the carious tooth. Great relief may, however, be obtained from putting into the hollow a pellet of cotton wool with *one* drop of oil of cloves or oil of nutmeg on it. A small piece of camphor kept in the mouth is a great relief. Creosote and all mineral acids destroy the teeth and are extremely dangerous to use, as an overdose might be permanently injurious, if not immediately fatal. The teeth should be brushed every morning and again every evening with clear water and powdered charcoal. When several teeth are aching at one time the cause is generally some rheumatic affection, and is best cured by the application of hot flannels to the face, first rubbing the outside of the cheek with some soothing liniment, or a hot brocation of poppy-heads. A trustworthy, though only temporary cure is: take a small piece of sheet zinc and a silver coin, a little larger than the zinc. Hold the tooth between them, letting the two metals touch each other. This is in fact a galvanic battery, and will act upon the nerve of the tooth in a very few minutes. We have tried the following very successfully: make a little muslin bag, and fill it with ground pepper; fasten up; dip it in brandy or whisky. Put this in *in the ear* on the side of the aching tooth. A little wad of tobacco placed in the tooth, or smoking a strong pipe will also give relief. Hollow teeth may be stopped, *when not aching*, by filling the hole with gutta-percha, made soft in hot water, and gently pressed into the tooth. This will harden, and prevent the air getting to the nerve.

Ear-ache and Deafness.—These are sometimes connected with chronic ulceration of the internal or external part of the ear, when injections of warm water and soap are advisable. Sometimes ear-ache continues many days without any apparent inflammation, and is then frequently removed by filling the ear with cotton or wool, wet with tincture of opium, or ether, or even with warm oil or warm water. Sometimes a pain in the ear is the consequence of sympathy with a diseased tooth, in which case the ether should be applied to the cheek over the suspected tooth.

Colds and Coughs.—Never neglect a cold; if promptly treated the worst cold can generally be cured in a few days. Barley water, weak tea, or gruel are all suitable drinks. Eat very little, and that of a very light kind, avoiding for a few days animal food. Drink no spirituous liquors, except a little hot rum and water, with a bit of butter, a slice of lemon, and sugar in it, on going to bed. This can do no harm, except to delicate persons. An excellent remedy is said to be an ounce of raisins, half an ounce of Spanish liquorice, and a tablespoonful of linseed, boiled in a pint of water until reduced to half a pint; then add a teaspoonful each of lemon-juice and rum, and drink off warm at bed-time every night until cured. A little can

also be taken now and then in the day-time. If this recipe be made up in larger quantities and kept, do not add the rum and lemon-juice until just before the dose is taken. A capital cure for a cold on the chest is to take a large coarse flannel, dip it in boiling water, sprinkle with turpentine, and cover the chest with it *instanter*. The old women's remedy of tallowing the nose at night and putting the feet in mustard and water, are not by any means to be neglected.

Restoration of the Apparently Drowned.

Never rub the body with salt or spirits, or roll it on the ground, or hold the head down. Continue the following treatment for many hours, so long as there is the slightest hope of restoring life. Persons have recovered after twelve hours' insensibility.

Strip the body and rub it dry; then wrap it in hot blankets, and place in a warm bed in a warm room.

Cleanse away the froth from the mouth and nose.

Apply warm bricks, bottles, bags of sand, &c., to the armpits, between the thighs, and to the soles of the feet.

Rub the body with the hands enclosed in worsted socks or with hot flannels.

To restore breathing, put the pipe of a pair of bellows to one nostril, while you carefully close the other with your finger, and keep the mouth shut. At the same time draw downwards, and gently push backwards the upper part of the windpipe to allow a more free admission of air. Then blow the bellows very gently, in order to inflate the lungs, till the breast be raised a little; then set the mouth and nostrils free, and press gently on the chest. Repeat this process, till signs of life appear. When the patient revives, apply smelling salts to his nose, and give him a few drops of warm wine, or brandy and water.

Dr. Marshall Hall's Method.—First, take the drowned person, into the open air, whether ashore or afloat, open the clothes, especially about the neck, chest, and waist, and send for the doctor. But even before he comes, attempt to *restore breathing*. Place the patient on the floor or ground, face downwards, with one arm under the forehead. In this position water swallowed will readily escape by the mouth, and the tongue itself will fall forward, leaving the entrance into the windpipe free. Assist this operation by wiping and cleansing the mouth.

If satisfactory breathing commences, use the treatment described below to promote warmth. If there be only slight breathing—or no breathing—or if the breathing fail, then—

To Excite Breathing—Turn the patient well and instantly on the side, supporting the head, and excite the nostrils with snuff, hartshorn, and smelling salts, or tickle the throat with a feather, &c., if they are at hand. Rub the chest and face warm, and dash cold water, or cold and hot water alternately on them. If there be no success, lose not a moment, but instantly—

To Imitate Breathing—Replace the patient on the face, raising and supporting the chest well on a folded coat or other article of dress. Turn the body very gently on the side and a little beyond, and then briskly on the face back again; repeating these measures cautiously, efficiently, and perseveringly about fifteen times in the minute, or once every four or five seconds, occasionally varying the side. *By placing the patient on the chest, the weight of the body forces the air out; when turned on the side, this pressure is removed and air enters the chest.* On each occasion that the body is replaced on the face, make uniform but efficient pressure with brisk movement, on the back between and below the shoulder-blades, or bones on each side, removing the pressure immediately before turning the body on the side. During the whole of the operations let one person attend solely to the movements of the head, and of the arm placed under it. *The first measure increases the expiration, the second commences inspiration.* The result is *Respiration* or *Natural Breathing*—and if not too late, *Life.*

Whilst the above operations are being proceeded with, dry the hands and feet; and as soon as dry clothing or blankets can be procured, strip the body and cover, or gradually reclothe it, but taking care not to interfere with the efforts to restore breathing.

Should these efforts not prove successful in the course of from two to five minutes, proceed to imitate breathing by

Dr. Silvester's Method.—Place the patient on the back on a flat surface, inclined a little upwards from the feet; raise and support the head and shoulders on a small firm cushion or folded article of dress placed under the shoulder-blades.

Draw forward the patient's tongue, and keep it projecting beyond the lips; an elastic band over the tongue, and under the chin will answer this purpose, or a piece of string or tape may be tied round them, or by raising the lower jaw, the teeth may be made to retain the tongue in that position. Remove all tight clothing from the neck and chest, especially the braces.

To Imitate the Movements of Breathing.—Standing at the patient's head, grasp the arms just above the elbows, and draw the arms gently and steadily upwards above the head, and *keep them stretched* upwards for two seconds. *By this means air is drawn into the lungs.* Then turn down the patient's arms, and press them gently and firmly for two seconds against the sides of the chest. *By this means air is pressed out of the lungs.* Repeat these measures alternately, deliberately, and perseveringly, about fifteen times in a minute, until a spontaneous effort to respire is perceived, immediately upon which, cease to imitate the movements of breathing, and proceed to induce circulation and warmth.

Treatment after Natural Breathing has been Restored—To promote warmth and circulation, commence rubbing the limbs upwards, with firm grasping pressure and energy, using handkerchiefs, flannels &c.: *by this measure the blood is propelled along the veins towards the heart.*

The friction must be continued under the blanket or over the dry clothing. Promote the warmth of the body by the application of hot flannels, bottles or bladders of hot water, heated bricks, &c., and to pit of the stomach, the armpits, between the thighs, and to the soles of the feet. If the patient has been carried to a house after respiration has been restored, be careful to let the air play freely about the room. On the restoration of life, a teaspoonful of warm water should be given; and then, if the power of swallowing has returned, small quantities of wine, warm brandy-and-water, or coffee, should be administered. The patient should be kept in bed, and a disposition to sleep encouraged.

Leeches (to apply.)—When leeches are ordered by the medical man, wash the part to be operated on with soap and warm water, and then with plain cold water; dry well. Observe that leeches will not bite if the patient has been taking sulphur internally, or if there be any peculiar odour in the room, such as the vapour of hot vinegar, the smoke from burning brown paper, that from lighting a candle with a sulphur match, from blowing out a candle, or tobacco smoke. If the part be hot and inflamed, the leeches should be put, for a few minutes, into tepid water; and also when to be applied in the mouth, or to any very warm part of the body. At all times, before applied, they should be dried between the folds of a fine towel. Place the number to be used in a hollow in a towel; then, so to turn the towel and the leeches upon the part that the towel will cover them. The hand must be kept over the towel until all bite. If this plan cannot be pursued, scratch the skin with a needle, and apply the leech to the spot. When they are to be applied within the mouth, put each leech into a large quill; apply the open end and retain until the leech is fixed, when the quill may be gently withdrawn. Leeches should never be forcibly detached, but should be permitted to drop spontaneously. A bread-and-water poultice, not too hot, should then be laid over

the bites, to encourage the bleeding. When a large quantity of blood is to be taken, the invalid should be kept warm in bed. When the bleeding is too profuse, it may usually be stopped by pressing into the holes small pledgets of lint dipped in spirits of wine, or the muriated tincture of steel, or touching them lightly with a pointed piece of lunar caustic. If neither of these methods succeed, it will be requisite to pass a stitch, with a fine needle and silk, through each of the bleeding orifices. Bleeding must *in every case* be stopped before the patient is left for the night.

Boils, Carbuncles, &c. — Common boils are to be poulticed with linseed meal, or bread and water. Warm fomentations, as for abscesses, (which *see*) are necessary. The diet of the patient should be generous, and wine must be given. Lint soaked with olive oil, and bound over the boil, keeps the air from it, and allows the patient to go about his regular business. If these means do not disperse the boil, medical advice must be sought, as the tumour may ulcerate and produce troublesome sores. Carbuncles are larger and more painful boils, and are to be treated in the same way.

Abscesses.—These are treated with linseed meal, and bread and water poultices, and warm fomentations; the bowels being kept open with mild aperients. A generous diet, with wine, is necessary to keep up the patient's strength. A good fomentation is :—One ounce of bruised poppy heads, and two ounces each of camomile flowers, and marsh-mallow leaves, infused for several hours in two quarts of boiling water. The poultices and fomentations must be continued until the abscess bursts. When this is the case see that the matter is fully discharged, and then dress the wound for a day or two with moist rags. Then anoint with spermaceti ointment and lint. When there is great pain, and the abscess though ripe, does not burst, the "head" may be opened with a lancet. When an abscess is slow in ripening, a poultice of oatmeal and water, with a little yeast and salt, will stimulate it.

Loss of Appetite.—When this disorder is chronic, medical advice must be obtained ; but when spontaneous, as where the stomach is loaded with bile, or crudities, an emetic in the evening, with some kind of stomachic purgative the next morning, will seldom fail to effect a cure.

Vertigo usually proceeds from too great a fulness of the blood-vessels of the head, or is brought on by dyspepsia or hysteria. When vertigo comes on, the patient is suddenly seized with a swimming or giddiness in the head, and is in danger of falling. When there is great fulness of blood, leeches to the temples will be necessary, as well as cooling purgatives, and spare living, until the patient has recovered. Where there does not appear much giddiness, vinegar rags laid over the forehead and temples will often cure it. The patient should have rest, and the head be kept well raised. Plenty of cool air, *but no draught*, must be allowed in the room.

Sore Throat. — In severe cases, leeches must be applied under the ears. Emetics, saline purgatives, and mustard plaisters must be employed in the cure. Simple cases will, however, be cured by simply rubbing the throat two or three times a day outside, with a camphor liniment and covering with flannel. Gargles of vinegar are very useful.

Ulcerated Sore Throat.—This disorder, which is contagious, usually comes on with cold shiverings, anxiety, nausea, and vomiting, succeeded by heat, restlessness, thirst, debility, and oppression at the chest ; the face looks flushed, the eyes are red, a stiffness is perceived in the neck, with a hurried respiration, hoarseness of voice, and soreness in the throat. After a short time the breath becomes offensive, the tongue is covered with a thick brown fur, and the inside of the lips is beset with vesicles, containing an acrid matter. Upon inspecting the throat, a number of sloughs, between a light ash and a dark brown colour, are to be observed. From the first attack of

the complaint, there is a considerable degree of fever, with a small irregular pulse, and the fever increases in the evening. An emetic must be given, and the doctor sent for, directly these symptoms are recognised. Through the whole illness the patient must have only liquid nourishment, such as beef-tea, gruel, barley-water, tapioca, sago, rice or arrowroot, wine negus, or lemonade. Gargles of vinegar and barley-water are used with advantage. Keep the mouth and throat very clean.

Inflammation of the Eyes.—Dust, small flies, lime, and many other things occasionally get beneath the eyelid. These may be removed by holding the eye closed for a minute, when the substance will work into the corner, and be easily removed with the corner of a silk handkerchief. The following lotion is very useful:—a tablespoonful of brandy, a teaspoonful of vinegar, and half a pint of spring water. A shade of green silk should be worn while the eye is inflamed, and violent light avoided. Bathing the head and face frequently in cold water, and abstaining for a time from food or drink of a stimulating or heating nature, will generally cure mild cases. When the inflammation is severe and arises from any organic disorder, a medical opinion must be obtained upon it, as what seems simple inflammation may be a constitutional disorder. Bread poultices may always be safely applied, but the great majority of eye-waters, eye-lotions, and poultices are dangerous in the hands of unskilled persons.

Pimpled, or Blotched Face.—Many persons of sanguine temperament suffer from blotched faces without their general health being at all affected. In such cases external applications of a stimulating nature—such, for instance, as contain alcohol, do considerable good. Acrid lotions must not be employed when there is much inflammation. For soothing the irritation a mixture of four ounces of yolk of eggs with five ounces of pure glycerine, will be found excellent. It forms a pliable varnish, and protects the part from the air. A lotion, made by pouring a quart of boiling water on to an ounce of broken sulphur and allowed to infuse for several hours, is also useful. When the pimples or blotches proceed from any derangement of the liver or stomach, lotions are useless, and the doctor must be consulted. A course of sarsaparilla has, by purifying the blood, often succeeded in these cases.

Neuralgia (Tic Douloreux).—There are several popular but unsafe nostrums for this complaint. Horse-radish, scraped or bruised, applied to the part, is, however, safe, and is said to cure it. Put a drachm of sal-ammonia in two ounces of camphor-water, and take teaspoonful doses now and then till the pain is relieved. The many poisonous mixtures should not be taken except under the advice of a medical man. Chloroform is a sovereign remedy, but must *on no account* be applied by an unprofessional person.

Palpitation of the Heart.—During the attacks the quicker and stronger beating of the heart may be felt, seen, and even heard. The disorder is often brought on by tight lacing, indolence, or luxurious living: when this is the case, remove the cause. If it arises from plethora, meat and all fermented liquors must be avoided. Regular exercise and cooling purgatives employed, and the hours of sleep shortened. If from general debility, stomachic bitters, tonics, change of air, and cold-bathing will be of service. When in consequence of nervous irritability, tonics and change of air will also be proper remedies. But if the disease arises from an organic affection of the heart, and of the large blood-vessels that immediately proceed from it, in consequence of aneurisms, then it must be treated by skilled hands, and all that can be done is to avoid carefully the circumstances which may expose to any increased action of the heart and the blood system—as violent exercise, fits of passion, great exertions of the body, stimulating diet, and all kinds of spirituous liquors.

Heartburn.—This is usually shown by pains in the stomach, accompanied by heat and gnawing, faintness, and nausea. A good remedy is a teaspoonful of carbonate of magnesia, or carbonate of soda, in a wineglass of peppermint or cinnamon water, with a little powdered ginger in it. Take this every four hours till cured. Drink nothing but soda-water, toast-and-water, and weak spirits and water, and live on dry food.

Inflammation of the Liver.—There are two forms of this complaint, the acute and the chronic. In neither case is it advisable for the patient to attempt self-treatment; but in the absence of the doctor a gentle purgative may be administered, and perspiration promoted by a sudorific. In both cases, however, great attention should be paid to diet, which should be of a farinaceous kind, without meat, to which cooling acid drinks should be freely added. In the cure of chronic inflammation of the liver, mercury is almost invariably and necessarily administered, and the local pain alleviated by means of blisters; but neither drug nor blister should be adopted without medical advice.

Inflammation of the Kidneys.—This disease arises from various causes, as stone or gravel in the kidneys, cold, violent exertion, hereditary gout, and external injury from accident or violence. The symptoms are sharp pains in the side, costiveness, with a frequent desire to urinate, uneasiness over the region of the stomach, colic, and inability to sit or stand, without pain. In those cases in which medical aid cannot be readily obtained, the best plan is to empty the stomach by means of a gentle aperient—as an ounce of castor oil, or a little tartrate of potass and tincture of senna in warm water, and to administer mild diaphoretics. All stimulating food to be avoided, as everything of a heating or acrid nature is hurtful to the kidneys; warm baths may be frequently resorted to, and hot flannels applied to the part affected.

Dysentery is an inflammation of the mucous membrane of the intestines, attended by griping pains, a constant desire to evacuate the bowels, and a discharge of mucus and blood. Give a gentle emetic and afterwards castor oil or some saline purgative. This will usually ease the pain, and in a day or two it will pass away.

Avoid all vain attempts to discharge the contents of the bowels, as also all violent strainings. Warm fomentations may be applied to the anus; and when the pain is removed, the impaired tone of the intestines may be restored by the use of tonics and bitters, in moderation. Feed the patient upon light nutritive food, such as preparations of rice, sago, arrowroot, or barley, with milk; and light gelatinous broths. Warm clothing is very necessary, and flannel should be worn next the skin by all persons subject to attacks of dysentery. Cold, damp, and night air must be avoided as much as possible. A little wine—Port or Madeira—is useful in the progress towards convalescence.

When, on the first seizure, the symptoms run high, and the patient's strength is prostrated the doctor must be sent for, as we have only spoken above of mild attacks.

Indigestion (*Dyspepsia*).—The usual symptoms are:—Want of appetite, pains and distensions of the stomach, heartburn and costiveness or diarrhœa. The most frequent causes are over-indulgence in the luxuries of the table, want of regular exercise, both bodily and mental, the fatigues of business, or inebriety. The treatment depends more upon the adoption of regular habits than on medicine. Moderation in eating and drinking; early rising and proper exercise; cessation from great mental study and exertion. Mild aperients should be taken if the bowels be confined, and the stomach should be strengthened by the moderate use of bitters and tonics. The use of a tepid bath, of about ninety-six or ninety-eight degrees of heat, for half an hour every other day, for two or three months, has, in many instances, proved of great service. The temperature of the bath should be reduced each time, until at last the patient

bathes with pleasure in perfectly cold water.

The mind is to be amused at the same time that the body is employed. The diet in indigestion ought to be nutritive and generous, consisting chiefly of game, tender mutton and poultry; and it should be taken in three or four meals per diem, and never exceed a few ounces at any time. Due care is to be taken to masticate it properly. Instead of fermented bread, the patient should eat biscuit with his food, *but never between meals*, or else the stomach has no time for repose. No diluent fluids should be taken at meals, nor till some time after each repast, nor should the quantity of the fluid taken at once exceed half a pint, nor be repeated oftener than at intervals of three hours. A moderate use of wines ought to be allowed; but should these disagree, and become acid on the stomach, weak brandy and water may be substituted for ordinary drink. Under no other circumstances should ardent spirits be made use of. The best food in severe indigestion is probably water gruel, made thick, slightly sweetened, and with the addition of a very small quantity of brandy. By taking this food for two or three days, *and no other*, very severe symptoms of indigestion are frequently removed, and the stomach is gradually brought to a tone, which enables it to digest food of a more stimulating character.

Rheumatism.—This is a very painful affection of the joints, causing swelling stiffness; it also attacks the muscles, tendons, and fibrous tissues. As this disease is likely to become chronic if neglected, the doctor must be called in if the symptoms are at all severe. Rheumatism usually comes on with lassitude and rigors, succeeded by heat, thirst, anxiety, restlessness, and a hard, full, and quick pulse; the tongue preserving a steady whiteness. After a short time, excruciating pains are felt in different parts of the body, more especially the shoulders, wrists, knees, and hips; these pains shift from one joint to another, leaving redness, swelling, and tenderness to the touch behind them. Towards evening, there is usually an increase of fever, and during the night the pains become more severe.

Tonics—such as bark, quinine, &c., — accompanied by mild purgatives, and sedatives are prescribed. Whenever possible, a dry atmosphere, and regular temperature must be sought. Stimulating embrocations, blisters, friction, and hot and vapour baths, often effect a cure, especially in *lumbago* (or rheumatism of the loins), and casual attacks arising from cold and damp. Sciatica, rheumatic gout, and rheumatic fever are too serious to be treated without the doctor. A remedy said to be excellent, is to beat into a paste in a mortar, two powdered nutmegs, four ounces of flowers of sulphur, two ounces of cream of tartar, half an ounce of rhubarb, a quarter of an ounce of gumguaiacum, and one and a half pounds of best honey. Take two tablespoonfuls every morning, and the same quantity every evening.

Immersing the whole body, several times a day, for a quarter of an hour, in a warm bath, or pouring warm water from a kettle upon the limb, has, in many instances, proved very useful. The temperature of the bath may be from ninety to one hundred and fourteen degrees. The vapour of hot water, locally applied, will seldom fail to prove beneficial. A large boiler, with a pipe affixed to it, forms a simple apparatus, with which the affected parts may be steamed for about half an hour, two or three times a day.

Persons that are subject to rheumatic complaints ought to avoid exposing themselves to cold and wet, should be warmly clothed, and wear flannel next the skin, both summer and winter.

Bronchitis (*or Winter Cough*).—The same remarks as to diet and living apply to this as to asthma, (which *see*). The symptoms are, running at the eyes and nose, dry cough, hoarseness, fever, shivering, dullness, and headache. In its mild form this disorder is called a *cold on the chest*, and is relieved by application of mustard poultices and the administration of small and repeated doses of ipeca-

cuanha, and antimonial diaphoretics, at the same time adopting a light diet, and keeping the bowels open by mild laxatives. When there are unfavourable symptoms,—irregular and feeble pulse, cold sweats, increased mucus, and prostration of strength, the doctor must be sent for *without delay*, as, if wheezing and delirium come on, there is real and immediate danger.

Asthma.—This disease is characterized by great difficulty of breathing, coming on in fits, accompanied by wheezing, cough, and tightness of the chest. It is brought on by sudden exposure to cold, by hard drinking, surfeit, violent exercise, and cold, damp, and foggy weather. The best course is to seek a dry, warm, and airy situation, keep the bowels regular, and the stomach in order, and wear flannels next the skin. Chronic asthma is supposed to be incurable, but the paroxysms may be moderated by taking twenty or twenty-five drops of chlorodyne in a wineglass of water. Or, sit up in bed, or in your chair, and inhale the vapour of hot water, or an infusion of camomile. Small doses of "Powell's Balsam" are also to be recommended. The following also give relief:—For an *expectorant*, take syrup of squills, four ounces; milk of gum ammoniacum, six ounces; wine of ipecacuanha, two ounces. Mix. The dose is a small teaspoonful four or five times daily.—For a *tonic*, take infusion of gentian, four ounces; infusion of cascarilla, six ounces; simple syrup, two ounces. Mix. The dose is two tablespoonfuls three times a day. A light nutritious diet and strictly regular habits should be adopted, and will produce a marked improvement, the paroxysms will neither be so long nor so severe, and the patient will experience considerable ease both of mind and body. When asthma attacks a person of considerable age, a skilled physician should be consulted whenever possible. People live with asthma for many years, and their sufferings can be mitigated by following these instructions. All vinous, spirituous, and fermented liquors are injurious. Tea would likewise be objectionable, from its being usually drunk warm, and thus weakening the nerves of the stomach; coffee, when taken very strong, without milk or sugar, has been found very advantageous. Garlic is sometimes of service to asthmatical persons. Acids of all kinds usually agree with them. Both in moist and dry asthma, the following pills will, we believe, prove efficacious. Gum ammoniac powdered, and asafœtida, each one drachm, and of balsamic syrup, enough to make twenty-four pills, of which three are to be taken twice a day. Or, mix an equal quantity of oxymel of squills and cinnamon water, and take a table-spoonful three or four times a day. For the dry asthma, take three, five, eight, or ten grains of the powder of ipecacuanha in small doses. The dried leaves of the narcotic herb, Stramonium, smoked as tobacco, are very efficacious.

Costiveness (or Constipation).—The symptoms are feverishness, want of appetite, and headache, besides the defect of the regular evacuations. The great and fruitful case of this complaint is the neglect of the regular and unvarying time of passing the excrement; every person should have a certain time, every day, and keep that time: morning, soon after breakfast, is perhaps the best. The use of bread containing alum, and water containing lime, and want of sufficient exercise, all produce costiveness. The disorder will be corrected by occasionally taking mild laxatives, such as jalap, senna, castor oil, &c. In cases where costiveness has become inveterate, and the above remedies have failed, charcoal finely levigated, and mixed with three ounces of confectio sennæ, and two drachms of carbonate of soda added to it, should be taken in doses of from half an ounce to an ounce at a time, as circumstances may require. Should this not move the bowels, get a strong pill or draught from the doctor. If a moderate quantity of green vegetables, ripe fruits, raisins, tamarinds and drum figs be occasionally eaten, and the directions above given, be carried out, habitual costiveness will generally be

overcome. Brown bread, and oatmeal porridge are also of signal service in these cases. Walking exercise is a great assistant to these remedies, as well as being an active agent in keeping the bowels regular, and in order.

Diarrhœa. — The looseness which often attends on teething must not be too abruptly checked, as unless it prevails in a great degree, it is a real benefit and relief to the child. If, however, there is much pain and griping, four grains of toasted rhubarb, mixed with double that quantity of prepared chalk, or magnesia, should be given. Another capital medicine is half a teaspoonful of Dalby's Carminative in about twice the quantity of castor oil. When the diarrhœa is violent, a dose every two hours of Tincture of Kino (ten to twenty-five drops according to age), mixed in a spoonful of syrup, will generally check it. Diarrhœa in adults is, in its first stages, easily overcome by a few drops (never more than twenty-five at a time) of chlorodyne every three or four hours. This is the dose for a strong and full-grown person. Young or weakly patients must not have more than ten to sixteen drops. Dilute the chlorodyne in a wine-glass of water. Or, a wineglass every hour of this mixture will give relief. Rhubarb, forty grains; magnesia, thirty-five grains; laudanum, sixty drops; double distilled peppermint water, one pint. If the disorder is not stayed in two or three hours, send for the doctor. From whatever cause a looseness may proceed, the diet ought to consist of rice boiled with milk, preparations of sago, or arrowroot, and the lighter sorts of meats roasted, as lamb, or chickens. Weak brandy and water, or diluted wine, may be substituted for malt liquor, as common drink. Half a wineglass of brandy, neat, or filled up with port wine, will often stop incipient diarrhœa. Those who are liable to frequent returns of this disease, should live temperately, avoid crude summer fruits, most kind of vegetables, all unwholesome food, and meats of hard digestion. They ought, also, to beware of cold, moisture, or whatever may obstruct the perspiration, and they should invariably—winter and summer—wear flannel next the skin.

Cholera. — This dreaded disease is often epidemic. It usually comes on with nausea, soreness, pain, distention, and flatulency in the stomach, and acute griping pains in the bowels, succeeded, after a time, by a severe and frequent vomiting and purging of bilious matter, heat, thirst, a hurried respiration, and a frequent, but weak and fluttering pulse. When the disease is not violent, these symptoms gradually cease after a day or two, leaving the patient in a debilitated and exhausted state; but where the disease proceeds with much violence, there arises great depression of strength, with cold sweats, considerable anxiety, a hurried and short respiration, cramps in the legs, coldness of the extremities, and hiccups, with a sinking and irregularity of the pulse, which, in the majority of cases, quickly terminates in death. Directly the symptoms are recognised — especially if cholera be epidemic at the time—the doctor must be called in. Before he arrives—if at all delayed—give the patient a dose of castor oil, and let him drink copiously of barley water, toast and water, water gruel, or any other diluent liquors. A teaspoonful of laudanum may be rubbed over the stomach and bowels. Small doses—at intervals of about two hours—of chlorodyne give great relief.

On his recovery the patient should pay particular attention to diet, carefully abstaining from all things which might promote a return of the disease, and using only such as are light and nutritious. Beer and raw fruit are not wholesome to persons subject to relaxed bowels. Minute attention to the functions of the skin, by flannel and other warm clothing, is necessary; while the night air, and sudden alterations of temperature are to be cautiously guarded against. Cholera is infectious, and the patient's clothes, bed-linen, &c., must be thoroughly cleaned and disinfected before again using. All the discharges from the

patient should be mixed with *Condy's fluid*, or some other *disinfectant*, and removed at once. The following remedy has the approval of Dr. Gavin :—"Take of bicarbonate of ammonia, eight grains ; tincture of opium, eight grains ; tincture of ginger, twenty drops ; tincture of catechu, one drachm ; aromatic confection, ten grains ; chalk mixture or camphor mixture, one and a half or two ounces, to form a draught. Creosote three to five drops in the chalk mixture, if accompanied with much pain."

During a visitation of cholera conform strictly and assist every measure put in operation by the authorities ; get rid of all smells, keep your house and its ground or garden scrupulously clean, use disinfectants plentifully ; have no dung heaps, no dust or ash heaps ; let there be no standing water about in areas or back yards ; have your ceilings lime-washed ; avoid crowding your sleeping-rooms ; consign chimney-boards and other blocks on ventilation to the cellar ; get plenty of pure air into your rooms by every possible means, and get rid of the foul air ; agitate, and get all nuisances removed ; have no rabbits or poultry within doors ; let every one in the household be particularly clean ; wear flannel next to the skin ; drink very little beer, and no water that has not been filtered through animal charcoal ; and lastly, take plenty of good out-door exercise, and keep one of the preceding recipes always at hand.

Itch.—This disease consists of an eruption of little watery vesicles between the fingers, on the wrists, stomach, thighs, &c., which itch intensely, and the irritation is only increased by scratching. The disorder is very contagious, and the patient should not shake hands or mingle more than is really necessary with his associates. The eruption and itching are produced by a small animal, called acarus scabiei, which burrows between the two layers of the skin, and hence the object in the treatment is to kill these animals, when the eruption and irritation disappear spontaneously. The best and safest remedy is sulphur, taken both internally and externally. For the ointment—which must be rubbed into all the affected parts every night on going to bed—take a quarter of a pound of flowers of sulphur, and mix with half a pound of hog's lard or butter, and four drachms of crude sal-ammoniac. If a drachm of essence of lemon be added it will remove the disagreeable smell. Every morning and night a teaspoonful of flowers of sulphur mixed in treacle or milk must be swallowed. This sulphur remedy, disagreeable as it certainly is, is the quickest and most effectual remedy for the itch. The patient should sleep by himself, in gloves and flannel drawers and shirt. These underclothes—except, perhaps, the gloves—should be worn continually for two or three days and nights, and then fresh ones put on, and worn the same period. Every morning he should wash himself *well* all over with hot water and *soft* soap. By these means the very irritating disorder will be soon cured, when the clothes must all be fumigated and thoroughly washed and aired in the sun.

Dropsy consists of a collection of aqueous fluid in some parts of the body. It is known under different names according to the part attacked, and is usually a symptom of extreme debility and a broken-down constitution. The treatment depends entirely upon the circumstances with which the case is connected, and, therefore, skilled medical advice must be obtained directly the following symptoms are observed : distension of the belly, swelling of the feet and legs, difficult breathing, a dry skin, and very little palpitation, a difficulty of voiding urine, immoderate thirst, and a dry, "hacking" cough.

Inflammation of the Lungs usually begins with shivering, followed by considerable fever, obtuse pains in the chest or side, great difficulty of breathing, together with a cough, a very full pulse and dry skin, flushings of the face, and thirst. This disease is very dangerous, and must be promptly placed under the doctor's charge. A vapour bath, and the inhalation of the

steam arising from bitter herbs put into a teapot with boiling water, are excellent aids in relieving the chest. The inhaling may be repeated every two or three hours. Free perspiration must be induced by sudorific (*i.e.* sweat-causing) medicines—as hops, bitter herbs, or camomile flowers, infused in vinegar for a few hours. When the breathing is relieved an emetic and a laxative medicine may safely be given. During the whole course of the disease —which must be watched and attended throughout by a nurse who follows the medical man's instructions strictly—the patient must be kept to his bed, lying with head and shoulders elevated. The sick room to be kept to a proper temperature, neither below fifty, nor above sixty degrees of heat; and the patient's strength supported with food of a light, nutritive nature. Thin gruel and barley-water should be his common drink. On recovering, exposure to cold should be carefully guarded against, as a relapse is apt to recur in this complaint, and which may bring on pulmonary consumption. In cases of inflammation of the lungs bloodletting is unwise; doctors only take this step in some extreme cases.

Consumption manifests itself by pain in the side of the chest, shortness of breath after walking or speaking, a cough, which generally proves most troublesome towards morning; general emaciation and debility, and lastly, by hectic fever. We shall attempt nothing here, as to the medical treatment of consumption. A few hints on diet, &c., will however be acceptable. It should consist of such things as are nutritive and easy of digestion, as dishes made of flour and milk, most kinds of vegetables and fruits, poached eggs, light puddings, custards, jellies, and animal broths. The various kinds of shell-fish—oysters, lobsters, crabs, prawns, and cray fish—will also be good. All fermented liquors, but more particularly spirituous ones, are to be avoided. Milk is very good, that of the ass is usually preferred; it ought to be taken several times a day, in a considerable quantity, and with a little bread. The milk of cows may be made lighter by allowing it to stand for some time, and then taking off the cream. At the commencement of pulmonary consumption, a free use of buttermilk has frequently been of advantage. The quantity should be gradually increased. The patient is at all times to avoid any irritation of the lungs, from singing, playing on wind instruments, or much speaking, or reading aloud. He should avoid going into crowded rooms, and should not place his body in a stooping position. All kinds of bodily exercise should be avoided which require much exertion, or exposure to cold. Flannel is to be worn next the skin all over. If the patient cannot bear flannel, he may try calico, but it is not nearly so good. Warmth and equability of temperature, especially in the winter months, are most essential points. Cod liver oil is perhaps the most valuable remedy we possess in consumption, and may be given in doses, beginning with a teaspoonful, and gradually increasing up to a tablespoonful, twice or thrice a day. Orange wine is the best thing for covering the disagreeable taste of the oil.

Ague. —The miasma of marshy ground, or stagnant water usually causes it. Vapour baths, hot fomentations, heat applied to the feet, and plenty of barley water, or gruel, may be administered during the cold stage. *The* remedy for the disease is quinine, and is quite specific in its effects. Administered in doses of from twenty to sixty grains shortly before the expected paroxysm, it checks it, and by continuing during the interval in smaller doses of from two to six grains, twice a day, the disease is usually cured. The patient should be very warmly dressed, and during the attacks, be covered with warm blankets. Persons subject to ague—or intermittent fever —should remove to a dry and bracing neighbourhood. The air of a city is more favourable than the air of the country to such persons.

In chronic cases the administration of *arsenic* sometimes answers better than quinine, but a medicine so power-

ful must never be had recourse to except under proper medical advice.

Gout is usually preceded by chilliness of the feet and legs, and a numbness and "pricking" along the lower extremities; there is flatulence, indigestion, want of appetite, and extreme langour. The fits usually come on in the night. The pain is usually in the great toe or the heel, and sometimes the whole foot, or calf of the leg, and it resembles that of a dislocated joint. Pouring cold water on the limb will often check a fit at its commencement. There is no effectual remedy that can be safely applied by unskilful persons. Colchicum is a great preventative, but its effects are so alarmingly powerful that no one should take it, unless under the doctor's advice.

Indolence, inactivity, luxurious habits of life, and free living are the chief exciting causes of this disease; but anxiety, grief, exposure to cold, and too free use of acidulated liquors sometimes bring it on. Temperate living, and plenty of exercise are the best preventatives, and in those who have an hereditary predisposition to gout, it is certain that it may often be prevented from taking place by paying an early and strict attention to these matters—temperance, exercise, and avoiding all exposure to cold.

Scurvy.—The symptoms are heaviness, weariness, depression of spirits, anxiety and debility. In the progress of the disease, the countenance becomes sallow and bloated, and the respiration hurried, the teeth become loose, and the gums spongy and swollen, and bleed on the slightest touch; the breath is very offensive, and livid spots appear on different parts of the body. Severe wandering pains are felt, particularly at night The urine is scanty, and the pulse small and frequent, and at last the joints become swollen and stiff. In the cure much more may be done by regimen than by medicines, obviating, as far as possible, the several remote causes of the disease, but providing the patient with a more wholesome diet, and a large proportion of fresh vegetables. Beverages strongly impregnated with the juice of limes, lemons, and oranges, or the effervescing saline draughts, are very beneficial. Cleanliness and ventilation should also be carefully attended to, and the air of the room in which the patient is confined, as well as his clothes, should be warm and dry. The bowels should be kept in an easy soluble state, and a determination of the circulation to the skin maintained by the use of mild diaphoretics, such as a few drops of spirits of nitre in water. Exercise, a generous and nutritive diet, and a life of great regularity and temperance, are to be strictly and emphatically enjoined.

Erysipelas. — When this disease attacks the face, it comes on with chil liness, succeeded by heat, restlessness, thirst and other febrile symptoms, with a drowsiness, or tendency to delirium, and the pulse is very frequent and full. At the end of two or three days, a fiery redness appears on some part of the face, and this at length extends to the scalp, and then gradually down the neck, leaving a tumefaction in every part the redness has occupied. The whole face at length becomes turgid, and the eyelids are so much swelled as to deprive the patient of sight. The danger of this disease, and its difficulty of treatment, make it compulsory that a skilful medical man should alone attempt to cure it. If such advice cannot be obtained, send the patient to the hospital. In slight cases, where the disease attacks the extremities, it makes its appearance with a roughness, heat, pain, and redness of the skin, which becomes pale when the finger is pressed upon it, and again returns to its former colour when it is removed. If the attack be mild, these symptoms will continue only for a few days; the surface of the part affected will become yellow, the outer skin will fall off in scales, and no further inconvenience will be experienced. But if the attack has been severe, there will ensue pains in the head and back, great heat, thirst, and restlessness, the part affected will slightly swell, and about the fourth day a number of little ve-

sicles, containing a limpid. and in some cases a yellow fluid, will arise.

Small-Pox.—The eruption generally makes its appearance about the third or fourth day after the first seizure; it shows itself first in little red spots on the face, neck, and breast, which continue to increase in number and size for three or four days. The eruption is commonly preceded by a redness in the eyes, a soreness in the throat, pains in the head, back, and loins; weariness and faintness, and alternate fits of chilliness and heat, together with thirst, nausea, and a quick pulse. When small-pox is epidemic, and a person who has never had it, is attacked with these symptoms, he ought to be immediately debarred from animal food, his drink impregnated with cooling acids, his bowels kept open with gentle laxatives, and he should more particularly be exposed to a cool air. The patient will be greatly refreshed, and all the symptoms become moderated, if there is a free ventilation of air. The temperature of his chamber should be such, that he may always feel rather a sensation of cold, though not actually chilly. He ought to lie upon a mattress, covered only with a few bed clothes, a feather bed being apt to occasion too much heat. This being done, the medical man must be summoned, and his instructions taken.

Female Complaints.

So much mischief has been caused by quack remedies for the several complaints to which young girls and newly-married women are subject, that we dare not venture upon giving advice. In all the functional disorders attendant upon the turn of life, marriage, &c., the only safe plan is to consult an experienced matron, who will know directly whether the case is one that needs the doctor. In other parts of this book will be found directions in case of fainting fits, hysterics, &c.; but for those serious derangements which occur from what are known as female irregularities we can only say,—put no faith in advertised pills and nostrums, as what may suit one person may do lasting harm to another.

Children's Complaints.

Weaning Brash occurs in children that are weaned too early, or in such as are reared without the breast; and also when improper food is given to the child, with or without suckling. It makes its first appearance with frequent griping and purging, the excrement being usually of a green colour; sometimes there is also bilious vomiting. When the disease has continued for some time, the excrement is ash-coloured. The treatment consists, first, in a proper attention to diet, and a return to the mother's milk, if possible. Asses' milk is about the best substitute for the mother's milk. Good cows' milk diluted with an equal quantity of water, and sweetened with a little loaf sugar, will be found the next most proper food. The addition of three or four tablespoonfuls of lime water to the pint of milk is of great service in correcting the acidity in the stomach, from which vomiting is frequently produced in children. Pure air, exercise, gentle frictions, and frequent washing of the body with tepid or cold water, will do the rest. Flannel worn next to the skin, worsted stockings, and every precaution against cold, must be employed.

Teething.—In all cases of painful teething the things to be done are:—to keep the bowels open with mild aperients, to allay the irritation by rubbing with a stale crust of bread, to use the hot bath whenever the skin appears much inflamed, and *to scarify the gums.* This last operation should—when possible—be done by the doctor; it is perfectly safe, and gives immediate and permanent relief, and prevents all after evil. If the ignorant prejudice were overcome, and mothers allowed their children's gums to be freely lanced in all cases of painful teething, we should hear little of convulsions or screaming fits. If the doctor is not at hand take your lancet, or sharp penknife, and cut the gum lengthways for half an inch—where most inflamed—right down to

the tooth. Then immediately make a second cut across the middle of the other, and as deep. This operation is *almost painless* to the child, and in most cases gives *instant relief*. It should however never be done, unless the gum be much swollen and hard, indicating that the tooth is fully formed. It has been observed that children in whom there is a copious flow of saliva suffer the least during teething, and that children cut their teeth more readily in winter than in summer. Further, that lean children cut their teeth more easily than fat; and those whose bowels are regularly open cut them the most safely of all. Pure air, proper exercise, wholesome food, and everything that has a tendency to promote general health, and to guard against fever, will greatly contribute to the child's passing safely through teething.

Convulsions.—These infantine fits are produced either by teething, worms, the presence of some acrid matter in the inside, or wind pent up; or they arise from the accession of some constitutional disease—as the small-pox, scarlatina, &c. Any trifling matter, capable of irritating the nervous system, will induce symptomatic convulsions in some infants. When convulsions proceed from any other cause than an eruption of the small-pox they are always dangerous. When the intervals are short, although the fit itself be not long or violent, the disease is more dangerous than when even severe paroxysms are attended with long intervals. First of all, put the child in a hot bath to cover his whole body up to the chin; if this cannot be done, put the child in a smaller, and splash him with the water. Cloths dipped in cold vinegar and water may be applied at the same time to the head. If no bath at all is at hand, rub the spine briskly for several minutes with the fingers dipped in brandy, or other spirit. Then immediately after the bath, give an aperient, and a little barley water, or weak nitre and water. An injection of half a pint of gruel with a tablespoonful of castor oil added, may also be administered. When the convulsions occur through teething, the lancet *must* be used, and that promptly (see *Teething*), but whenever possible, the doctor should be called in in cases of this sort The hot bath, however, is *sure* to be right, and must be used in all cases.

Jaundice.—This disease comes on with languor, inactivity, loathing of food, flatulency, acidity in the stomach and bowels, and costiveness. As it advances in its progress, the skin and the eyes become tinged of a deep yellow; there is a bitter taste in the mouth, with frequent nausea and vomiting. When these symptoms are observed the patient should be put in a hot bath, and the medical man sent for.

Thrush.—This ailment is a source of great irritation and pain to young children. It is shown by increased redness of the nostrils and lips, white spots on the tongue, hot and fœtid breath, and relaxation of the bowels. As the thrush extends over the mouth and throat, as well as the stomach and bowels, it is very little use to treat it locally. A warm bath and a little magnesia are however perfectly safe and good.

It should be known that the thrush is *not* in itself a disease but only a *symptom* of some other morbid condition in the system, and hence the necessity for skilled advice, in order that each case may be appropriately treated.

Croup.—This disease is very rapid and fatal in its effects, and must be treated with the greatest promptitude and energy. It is a stoppage of the windpipe occasioned by a substance forming inside it. The disease most frequently attacks fat, heavy, short-necked children, and is preceded by lassitude and wheezing, followed by great difficulty of breathing, distension of the veins of the neck, and a "crowing," or as it is called, "croupy" sound in the voice. These symptoms are followed by terrible fits of coughing which agonise the child, and cause him to expel a thick mucus. *Directly* these symptoms are recognised, the doctor should be sent for,

the child placed in a bath, as hot as it can bear it, right up to the neck, and an emetic administered. When the patient has been sick, put a mustard plaister round its neck, and keep it on as long as the child can bear it. If the doctor has not then arrived, you must give it a powder made thus:—Mix six grains of calomel, one grain of tartar emetic, and fifteen grains of powdered loaf sugar together, and give one every twenty or thirty minutes until there is relief. A linen rag saturated with "The Children's Life-preserver, Edgar's Croup Lotion," tied rather loosely round the throat, and kept wet with the lotion, is of great assistance. Remember, the first things are a hot bath and an emetic; these must on no account be delayed.

Nettle Rash shows itself by an eruption on the skin, similar to what is produced by the stinging of nettles. It is generally produced by eating indigestible articles of food, such as shell fish, cheese, &c. There is generally a little fever, and considerable itching. The body must be kept warm, free from all draughts, damp, &c., or the disease may strike inward and become serious. The eruption subsides in the day time, and increases in the evening. A little opening medicine, and a gentle emetic (proportioned to the age of the patient) are generally sufficient to effect a cure.

Summer Rash is treated in the same manner as nettle rash.

Mumps.—This disorder is often epidemic, and consists of a swelling on one or both sides of the neck. This swelling usually continues to increase, becomes large, hard, and somewhat painful, till on the fourth day it begins to decline, and a few days later entirely goes off, as does the fever likewise. The mumps do not often require more than to have the head and face kept warm, to avoid taking cold, and to keep the bowels well open. Should the swellings in the neck disappear suddenly, and the fever increase, so as to affect the brain, it will be necessary however, to call in the doctor, as strong liniments and warm fomentations are immediately necessary.

Scald Head.—This disease (which is closely allied to *Ringworm*, and is treated in the same way) is exceedingly contagious, and each case must be carefully kept separate. On no account must the child use another person's hat, comb, brush, or any other article that touches the head. Lunar caustic rubbed over the ring is, we believe, the surest and speediest remedy, but it must only be administered by a skilled doctor. The hair must be cut short, the head washed with soft soap every morning, and the following lotion applied every night: Two drachms of sub-carbonate of soda dissolved in a pint of vinegar. This is safe and tolerably efficacious, but as this loathsome disorder will rapidly spread, the doctor's aid had better be sought. Indeed in many instances—not only with the ringworm, but with other contagious diseases—people by attempting to supersede the doctor, do great harm, and only aid the disorder. The simple rules laid down in this book may, however, be safely followed.

Worms.—The symptoms are a variable appetite, fœtid breath, acid eructations, pains in the stomach, grinding of the teeth during sleep, picking of the nose, paleness of the countenance, hardness and fulness of the belly, slimy stools, with griping pains now and then; heat and itching about the anus, short, dry cough, emaciation of the body, slow fever, and sometimes convulsive fits. *Cowhage*, or cowitch, is believed to be a safe and certain remedy, and having only a mechanical action, it may be given to the most delicate infant; all that is necessary being to mix it with a little thick water gruel, taking care that it does not touch the skin of the face or hands; there is no danger in the contact with the moist part of the lips, consequently nothing is more easy than to administer it with a spoon. The dose for a child may be from five to ten grains, or even more, for it is not medicinal; and an adult may take from fifteen to thirty grains without the slightest inconvenience. The effect of this remedy is astonishing. It acts upon the skin of the worm, and so irritates it that it

looses its hold upon the intestines, and soon dies; it is then expelled by the natural course of evacuation; its expulsion may be hastened by the administration, twelve hours after taking the cowhage, of a dose of castor oil, or any other simple purgative. Cowhage is to be obtained at Apothecaries' Hall, or any wholesale druggist's. *This treatment has succeeded when all other means have failed.* For the cure of the tape worm, which is the most difficult to expel, the male fern has been much recommended. The dose for an adult is from one to two drachms. After two doses have been taken, a purge is to be employed. The oil of turpentine taken internally, in about one ounce for a woman, and one and a half for a robust man, is also used in cases of tape worm, with good effect. Dr. Graham, a high authority writes:—"I believe that there are few cases which will resist the proper use of salt, if the usual means of strengthening a weakly constitution be resorted to, and saccharine substances avoided as much as possible. Salt is particularly obnoxious to all kinds of worms. I would, therefore, advise persons troubled with these animals to increase their quantity of salt at each meal; to lessen that of every kind of sweet food; to avoid partaking much of vegetables; to regulate the bowels by the occasional employment of a mild pill, and to avail themselves of the usual means of strengthening the general habit, by having recourse to active exercise daily, early rising, the use of the cold or tepid bath, &c. These measures are highly advisable and useful, whatever kind of medicine be employed. At the same time a dose of salt and water, for example, an ounce or two of common salt, dissolved in nearly half a pint of water, should be taken in the morning fasting, and repeated at the end of three or four days. This will generally act as a purgative, and will certainly bring away almost every kind of worm. This plan is applicable to the cases of children as well as to those of adults, and, from what I have before said, it will be perceived how necessary it is for them to be restricted in the use of sweet things, and be taught to make a free use of salt at almost every meal. As a purging portion for young children half an ounce of salt dissolved in a quarter of a pint of water will usually be found a sufficient quantity."

Measles.—The eruption is usually preceded by a chilliness and shivering, succeeded by heat, thirst, anxiety, pains in the head, back, and loins, heaviness and redness of the face and eyes, with an effusion of tears, swelling of the eyelids, nausea, and sometimes a vomiting of bilious matter; and, added to these, there are hoarseness, dry cough, and a discharge of acrid matter from the nose. About the third or fourth day, small red spots appear in clusters about the face, neck, and breast; and in a day or two more the whole body is covered with them. On the fifth or sixth day the spots, from a vivid red, are changed to brown, and begin to dry away about the face; about the eighth or ninth day they disappear on the breast, and other parts of the body, with a mealy desquamation of the cuticle. Medical advice *must always* be obtained; and the following instructions followed out: The patient should, besides, drink freely of good barley water, and linseed tea, gently acidulated with lemon juice. A warm bath will also be of service, doing away with the necessity of bleeding. During the whole course of the complaint, the patient ought to be confined to his bed, and avoid any exposure to cold air, as it would probably interrupt the eruption; but great heat, and too heavy covering of bed-clothes, must also be avoided. The degree of temperature must be regulated by the patient's feelings. A liquid and cooling diet should be adopted at the commencement of the measles, always taking care not to carry it so far as to produce debility. When the measles prevail epidemically, confine such children as never had them to a vegetable diet, giving them a gentle opening medicine once or twice a week, as they will then be likely to have a mild form

of the complaint. The greatest care is necessary in the progress to convalescence.

Scarlet Fever.—In the mild form of scarlet fever (or scarlatina), the disorder begins with languor, lassitude, confusion of ideas, chills, and shiverings, alternated by fits of heat. After a little, the thirst increases, the skin becomes dry, and there is anxiety, nausea and vomiting. On the second or third day, the scarlet efflorescences appear on the skin, after three or four days they disappear, and are succeeded by a gentle perspiration; the fever then subsides, and the outer skin falls off in small scales. In malignant scarlet fever, the patient is not only seized with coldness and shivering, but with great languor, debility, and sickness, followed by heat, vomiting of bilious matter, great soreness of the throat, short and laborious breathing, and a quick, small, and depressed pulse. In the progress of the disease, a general redness pervades the face, body, and limbs, which appear somewhat swollen. The eyes and nostrils are likewise red; and from the latter there is an acrid discharge. A tendency to delirium prevails. In the malignant form the symptoms undergo no change on the first day; but on the following the pulse becomes small and irregular; the tongue, teeth, and lips, are covered with a brown or black crustation. The breath is extremely fœtid, the respiration laborious, the deglutition painful, the head becomes retracted, an acrid discharge flows from the nostrils, the tonsils and the adjoining parts are covered with dark sloughs, and deafness and delirium comes on. The rash is usually pale, and changes soon to a dark or livid red colour.

In its very mild form, and when unattended by any inflammation or ulceration, nothing further will be requisite than to keep the apartment clean and open, to follow a light diet, without animal food, to use acidulated liquors for drink, to take some gentle opening medicine, and to keep a hot bran poultice round the throat from the first symptom till the eighth or ninth day. In the more severe forms of the disease, administer an emetic on the first coming on of the fever, and send for the doctor. During convalescence, the greatest care is necessary againt exposure to cold, even in the mildest attacks. These precautions are necessary until the process of desquamation (falling off of the cuticle) is completed, which is seldom less than about a fortnight. If the patient is exposed to cold during this period, internal congestion, as of the kidneys, occurs, and *dropsy* supervenes. This is always a dangerous and intractable complication, and hence it should be known that the danger is not always over when the fever has subsided.

Whooping Cough.—This is a convulsive cough, interrupted by a full and sonorous inspiration, usually terminating by a vomiting or expectoration. The cough usually comes on with an oppression of breathing, some degree of thirst, a quick pulse, and other symptoms of fever; to which are succeeded hoarseness, cough, and a difficulty of respiration. These symptoms continue for about a fortnight or three weeks, when the cough becomes convulsive, and assumes the peculiar sound which is called a whoop. After the complaint has attained its height, it usually continues for some weeks, and then goes off gradually. In some cases it is, however, protracted for several months. The whooping, though very fatiguing, and subject to a return of violence on any fresh exposure to cold, seldom proves dangerous, except when the patient is very young, or when it is accompanied with some complication, such as bronchitis. It seldom happens that a person has this disease more than once. It is unwise to attempt the cure without the doctor's aid, but the following hints may be acted upon. A frequent change of air, and a flannel waistcoat next the skin, ought to be had recourse to. Young children should lie with their heads raised, and be made to stand upon their feet, bending a little forward, when the fits begin, in order to guard against suffocation. The diet should be light, and of easy digestion; gelatinous soups should be frequently

taken. Bathing the feet and body in warm water is to be recommended.

Chicken-pox. — This disease, like small-pox, only affects a person once, though there have been instances of second attacks. It is heralded by chilliness, followed by flushings and heat, pains in the head and back, thirst, restlesness, and a quick pulse; sometimes, however, no such symptoms are perceptible. About the second or third day, the pustules become filled with a watery fluid, and generally on the fifth day they dry away. In most cases it is only necessary to make use of a spare diet on the first appearance of the eruption, to resort to frequent warm baths, and to take one or two mild cooling purgatives afterwards; but should the fever be high and the patient weak, medical advice had better be sought, as this disorder, though not dangerous in itself, weakens and exposes the system to other attacks if not treated skilfully.

Vaccination is the undoubted means of saving thousands of lives annually. It it well known that those persons who have been vaccinated have the small-pox much more favourably, and that re-vaccination after the lapse of years renders nurses and others practically secure. All parents are strongly advised to have their children vaccinated. Two or three days before vaccination a mild aperient powder should be given. If during the progress of the disease of cow-pox, the child should take any other disease, it should, on its recovery, be re-vaccinated, and the doctor informed of the circumstances, as the lymph taken from its arm is not fit for vaccinating purposes, and is never used.

The Mode of Vaccination is to insert under the skin of one or both arms, just below the shoulder, lymph or matter taken from a healthy child. The better mode is to make three small scratches, thus "〃" with a lancet, and to work the matter under the skin. The place must then be allowed to dry thoroughly. About the fifth day there is redness round the places, and the inflammation increases until the ninth day, when the vaccine disease is usually at its height. The pustules are then re-opened by the doctor, and the inflammation subsides. The scabs gradually harden until, on or about the twentieth day, they fall off, and leave scars which last a lifetime.

Ventilation in Sick Rooms. —Under no circumstances is the ventilation of the sick room so essential as in the febrile diseases of an *infectious* kind. Such infection, however, rarely extends above a few feet from the body of the patient; and even in the most malignant diseases with the exception of the severer forms of small-pox and scarlet fever, its influence does not exceed a few yards, if the room be well ventilated. If, however, ventilation be neglected, the power of infection becomes greatly augmented from its concentration in confined air; it settles upon clothes and furniture. Smooth and polished surfaces do not easily receive or retain infectious matter; consequently the nurses and attendants, in cases of infectious diseases, should have glazed gowns, and aprons of oiled silk, and never "stuff," fur, or cotton.

Infection and Contagion.— The diseases usually regarded as infectious are typhus fever, plague, puerperal fever, influenza, whooping-cough, consumption in its latter stages, small-pox, chicken-pox, measles, scarlet-fever, and erysipelas. The term "through the air" is used to distinguish *infectious* from *contagious* diseases. Among the latter, which are communicated *only* by contact, are itch, sivvens, venereal diseases, yaws, scald head, ringworm, and Egyptian ophthalmia.

VI. ACCIDENTS AND INJURIES.

"TIME," according to the old proverb, "is money;" and it may also, in many cases, and with equal truthfulness, be said to be life; for a few moments, in great emergencies, often turn the balance between recovery and death. This applies more especially to all kinds of poisoning, fits, submersion in water, or exposure to noxious gases, and many accidents. If people knew how to act during the interval that must necessarily elapse from the moment that a medical man is sent for until he arrives, many lives might be saved, which now, unhappily, are lost. Generally speaking, however, nothing is done—all is confusion and fright; and the surgeon, on his arrival, finds that death has already seized its victim, who, had his friends but known a few rough rules for their guidance, might have been rescued. We shall, therefore, in a series of remarks, give such information as to the means to be employed in the event of accidents, injuries, &c., as, by the aid of a gentleman of large professional experience, we are warranted in recommending.

List of Drugs, &c., necessary to carry out all Instructions.

We append at once a list of drugs, &c., and a few prescriptions necessary to carry out all the instructions given in this series of articles. It will be seen that they are few—they are not expensive; and by laying in a little stock of them, our instructions will be of instant value in all cases of accident, &c. The drugs are—Antimonial Wine. Antimonial Powder. Blister Compound. Blue Pill. Calomel. Carbonate of Potash. Compound Iron Pills. Compound Extract of Colocynth. Compound Tincture of Camphor. Epsom Salts. Goulard's Extract. Jalap, in powder. Linseed oil. Myrrh and Aloes Pills. Nitre. Oil of Turpentine. Opium, powdered, and Laudanum. Sal Ammoniac. Senna Leaves. Soap Liniment. Opodeldoc. Sweet Spirits of Nitre. Turner's Cerate.—To which should be added: Common Adhesive Plaster. Isinglass Plaster. Lint. A pair of small Scales, with weights. An ounce, and a drachm Measure-glass. A Lancet. A Probe. A pair of Forceps, and some curved needles.

The following prescriptions may be made up for a small sum, and, by keeping them properly labelled, and by referring to the remarks on the treatment of any particular case, much suffering, and perhaps some lives, may be saved.

Emetic Draught.—Twenty grains of sulphate of zinc in an ounce and a half of water. This draught is to be repeated in a quarter of an hour, if vomiting does not take place.

Injection.—Two tablespoonfuls of oil of turpentine in a pint of warm gruel.

Liniments.—1. Equal parts of lime-water and linseed-oil well mixed together. [Lime-water is made thus: Pour six pints of boiling water upon ¼lb. of lime; mix well together, and when cool strain the liquid from off the lime which has fallen to the bottom, taking care to get it as clear as possible.] 2. Compound camphor liniment.

Lotions.—1. Mix a dessert spoonful of Goulard's extract and two tablespoonfuls of vinegar in a pint of water. 2. Mix ½ oz. of sal-ammoniac, 2 tablespoonfuls of vinegar, and the same quantity of gin or whisky, in half a pint of water.

Goulard Lotion.—1 drachm of sugar of lead, 2 pints of rain-water, 2 teaspoonfuls of spirits of wine. For inflammation of the eyes or elsewhere:—The better way of making Goulard Lotion, if for the eyes, is to add to 6

oz. of distilled water, or water that has been well boiled, 1 drachm of the extract of lead.

Opodeldoc.—This lotion being a valuable application for sprains, lumbago, weakness of joints, &c., and it being difficult to procure, either pure or freshly made, we give a recipe for its preparation. Dissolve 1 oz. of camphor in a pint of rectified spirits of wine; then dissolve 4 oz. of hard white Spanish soap, scraped thin, in 4 oz. of oil of rosemary, and mix them together.

The Common Black Draught, so much used in England.—Infusion of senna 10 drachms; Epsom salts 10 drachms; tincture of senna, compound tincture of cardamoms, compound spirit of lavender, of each 1 drachm. Families who make black draught in quantity, and wish to preserve it for some time without spoiling, should add about two drachms of spirits of hartshorn to each pint of the strained mixture, the use of this drug being to prevent its becoming mouldy or decomposed. A simpler and equally efficacious form of black draught is made by infusing ½ oz. of Alexandrian senna, 3 oz. of Epsom salts, and 2 drachms of bruised ginger and coriander seeds, for several hours in a pint of boiling water, straining the liquor, and adding either 2 drachms of sal-volatile or spirits of hartshorn to the whole, and giving 3 tablespoonfuls for a dose to an adult.

Mixtures.—1. *Aperient.* — Dissolve an ounce of Epsom salts in half a pint of senna tea; take a quarter of the mixture as a dose, and repeat it in three or four hours if necessary.

Fever Mixture.—Mix a drachm of powdered nitre, 2 drachms of carbonate of potash, 2 teaspoonfuls of antimonial wine, and a tablespoonful of sweet spirits of nitre, in half a pint of water.

Myrrh and Aloes Pills.—Ten grains made into two pills are the dose for a full-grown person.

Compound Iron Pills.—Dose for a full-grown person: 10 grains made into two pills.

Pills.—1. Mix 5 grains of calomel and the same quantity of antimonial powder with a little bread crumb, and make them into two pills. Dose for a full-grown person: two pills.—2. Mix 5 grains of blue pill and the same quantity of compound extract of colocynth together, and make into two pills, the dose for a full-grown person.

Powders.—Mix a grain of calomel and 4 grains of powdered jalap together.

In all cases the dose of medicines given is to be regulated by the age of the patient.

Abernethy's Plan for making Bread and Water Poultice.—First scald out a basin; then, having put in some boiling water, throw in coarsely-crumbled bread, and cover it with a plate. When the bread has soaked up as much water as it will imbibe, drain off the remaining water, and there will be left a light pulp. Spread it a third of an inch thick on folded linen, and apply it when of the temperature of a warm bath. To preserve it moist, occasionally drop warm water on it.

Linseed Meal Poultice.—"Scald your basin by pouring a little hot water into it; then put a small quantity of finely-ground linseed meal into the basin, pour a little hot water on it, and stir it round briskly until you have well incorporated them; add a little more meal and a little more water; then stir it again. Do not let any lumps remain in the basin, but stir the poultice well, and do not be sparing of your trouble. What you do next is to take as much of it out of the basin as you may require, lay it on a piece of soft linen, and let it be about a quarter of an inch thick."—*Abernethy.* The practice of modern hospitals is to spread the poultice very thinly to lessen the weight on the patient: thus made, it requires renewing oftener.

Mustard Poultice.—Mix equal parts of dry mustard and linseed-meal in warm vinegar. When the poultice is wanted weak, warm water may be used for the vinegar; and when it is required very strong, mustard alone, without any linseed-meal, is to be mixed with warm vinegar. Mustard plasters are now prepared in a dry

form, like sheets of paper; these require to be immersed in water, hot or cold, and laid on the part affected; thus a mustard plaster may be had in a moment.

An Ordinary Blister.—Spread a little blister compound on a piece of common adhesive plaster with the right thumb. It should be put on just thickly enough to conceal the appearance of the plaster beneath. The part from which a blister has been taken should be covered till it heals over, with soft linen rags smeared with lard.

Baths and Fomentations.

All fluid applications to the body are exhibited either in a hot or cold form; and the object for which they are administered is to produce a stimulating effect over the entire, or a part, of the system; for the effect, though differently obtained, and varying in degree, is the same in principle, whether procured by hot or cold water.

Heat.—There are three forms in which heat is universally applied to the body,—that of the tepid, warm, and vapour bath; but as the first is too inert to be worth notice, and the last dangerous and inapplicable, except in public institutions, we shall confine our remarks to the really efficacious one—the

Warm and Hot Bath.—These baths are used whenever there is congestion, or accumulation of blood in the internal organs, causing pain, difficulty of breathing, or stupor, and are employed, by their stimulating property, to cause a rush of blood to the surface, and, by unloading the great organs, produce a temporary congestion in the skin, and so equalise the circulation. The effect of the hot bath is to increase the fulness of the pulse, accelerate respiration, and excite perspiration. In all inflammations of the stomach and bowels, the hot bath is of the utmost consequence; the temperature of the warm bath varies from 92° to 100°, and may be obtained by those who have no thermometer to test the exact heat, by mixing one measure of boiling with two of cold water. On leaving a warm bath a hot sheet should be thrown round the patient.

Fomentations are generally used to effect in a part the benefit produced on the whole body by the bath; to which a sedative action is occasionally given by the use of roots, herbs, or other ingredients; the object being to relieve the internal organ, as the throat, or muscles round a joint, by exciting a greater flow of blood to the skin *over* the affected part. As the real agent of relief is heat, the fomentation should always be as hot as it can comfortably be borne, and, to insure effect, should be repeated every half hour. Warm fluids are applied in order to render the swelling which accompanies inflammation less painful, by the greater readiness with which the skin yields, than when it is harsh and dry. They are of various kinds; but the most simple, and oftentimes the most useful that can be employed, is "Warm Water." Another kind of fomentation is composed of dried poppyheads, 4 oz. Break them to pieces, empty out the seeds, put them into four pints of water, boil for a quarter of an hour, then strain through a cloth or sieve, and keep the water for use Or, chamomile flowers, hemlock, and many other plants may be boiled, and the part fomented with the hot liquor, by means of flannels wetted with the decoction.

Cold, when applied in excess to the body, drives the blood from the surface to the centre, reduces the pulse, makes the breathing hard and difficult, produces coma, and, if long continued, death. But when medicinally used, it excites a reaction on the surface equivalent to a stimulating effect; as in some cases of fever, when the body has been sponged with cold water, it excites by reaction increased circulation on the skin. Cold is sometimes used to keep up a repellent action, as, when local inflammation takes place, a remedy is applied which, by its benumbing and astringent effect, causes the blood, or the excess of it in the part, to recede, and by contracting the vessels, prevents the return of any undue quantity, till the affected part

recovers its tone. Such remedies are called *Lotions*, and should, when used, be applied with the same persistency as the fomentation; for, as the latter should be renewed as often as the heat passes off, so the former should be applied as often as the heat from the skin deprives the application of its coldness.

Poultices are only another form of fomentation, though chiefly used for abscesses. The ingredient best suited for a poultice is that which retains heat the longest; of these ingredients, the best are linseed-meal, bran and bread. Bran sewed into a bag, as it can be reheated, will be found the cleanest and most useful, especially for sore throats.

How to Bleed.

In cases of great emergency, such as the strong kind of apoplexy, and when a surgeon cannot possibly be obtained for some considerable time, the life of the patient depends almost entirely upon the fact of his being bled or not. We therefore give instructions how the operation of bleeding is to be performed, but caution the reader only to attempt it in cases of the greatest emergency. Place a handkerchief or piece of tape rather but not too tightly round the arm, about three or four inches above the elbow. This will cause the veins below to swell, and become very evident. If this is not sufficient, the hand should be constantly and quickly opened and shut for the same purpose. There will now be seen, passing up the middle of the fore-arm, a vein which, just below the bend of the elbow, sends a branch inwards and outwards, each branch shortly joining another large vein. It is from the *outer* branch that the person is to be bled. The right arm is the one mostly operated on. The operator should take the lancet in his right hand, between the thumb and first finger, place the thumb of his left hand on the vein below the part where he is going to bleed from, and then gently thrust the tip of the lancet into the vein, and, taking care not to push it too deeply, cut in a gently curved direction, thus ⌣, and bring it out, point upwards, at about half an inch from the part of the vein into which he had thrust it. The vein must be cut lengthways, and not across. When sufficient blood has been taken away, remove the bandage from above the elbow, and place the thumb of the left hand firmly over the cut until all the bleeding ceases. A small pad of lint is then to be put over the cut, with a larger pad over it, and the two kept in their places by means of a handkerchief or linen roller bound pretty tightly over them and round the arm.

When a person is bled he should always be in the standing, or at any rate in the sitting, position; for if, as is often the case, he should happen to faint, he can, in most cases at least, easily be brought to again by the operator placing him flat on his back, and stopping the bleeding. *This is of the greatest importance.* It has been recommended, for what supposed advantages we don't know, to bleed people when they are lying down. Should a person, under these circumstances, faint, what could be done to bring him to again? The great treatment of lowering the body of the patient to the flat position cannot be followed here. It is in that position already, and cannot be placed lower than it at present is—except, as is most likely to be the case, under the ground.

Bleeding from the Nose. — Many children, especially those of a sanguineous temperament, are subject to sudden discharges of blood from some part of the body; and as all such fluxes are in general the result of an effort of Nature to relieve the system from some overload or pressure, such discharges, unless in excess, and when likely to produce debility, should not be rashly or too abruptly checked. In general, these discharges are confined to the summer or spring months of the year, and follow pains in the head, a sense of drowsiness, languor, or oppression; and, as such symptoms are relieved by the loss of blood, the hæmorrhage should, to a certain extent.

be encouraged. When, however, the bleeding is excessive, or returns too frequently, it becomes necessary to apply means to subdue or mitigate the amount. For this purpose the sudden and unexpected application of cold is itself sufficient, in most cases, to arrest the most active hæmorrhage. A wet towel laid suddenly on the back, between the shoulders, and placing the child in a recumbent posture, is often sufficient to effect the object; where, however, the effusion resists such simple means, napkins wrung out of cold water must be laid across the forehead and nose, the hands dipped in cold water, and a bottle of hot water applied to the feet. If, in spite of these means, the bleeding continues, a little fine wool or a few folds of lint, tied together by a piece of thread, must be pushed up the nostril from which the blood flows, to act as a plug and pressure on the bleeding vessel. When the discharge has entirely ceased, the plug is to be pulled out by means of the thread. To prevent a repetition of the hæmorrhage, the body should be sponged every morning with cold water, and the child put under a course of steel wine, have open-air exercise, and, if possible, salt-water bathing. For children, a key suddenly dropped down the back between the skin and clothes, will often immediately arrest a copious bleeding.

Spitting of Blood, or hæmorrhage from the lungs, is generally known from blood from the stomach by its being of a brighter colour, and in less quantities, than the latter which is always mixed with the half-digested food. In either case, rest should be immediately enjoined, total abstinence from stimulants, and a low, poor diet, accompanied with the horizontal position, and bottles of boiling water to the feet. At the same time the patient should suck through a quill, every hour, half a wine-glass of water in which ten or fifteen drops of the elixir of vitriol has been mixed, and, till further advice has been procured, keep a towel wrung out of cold water on the chest or stomach, according to the seat of the hæmorrhage.

Bites and Stings.

Bites and Stings may be divided into three kinds.—1. Those of Insects. 2. Those of Snakes. 3. Those of Dogs and other Animals.

1. *The Bites and Stings of Insects*, such as gnats, bees, wasps, &c., need cause very little alarm, and are, generally speaking, easily cured. They are very serious, however, when they take place on some delicate part of the body, such as near the eye, or in the throat. *The treatment* is very simple in most cases; and consists in taking out the sting, if it is left behind, with a needle, and applying to the part a liniment made of finely-scraped chalk and olive-oil, mixed together to about the thickness of cream.

To remove a Bee Sting, pull the sting out at once with the fingers or a needle. Pre s a key tightly over the stung part; this forces the poison out; wipe the place, suck it, and then apply the blue-bag.

Bathing the part bitten with warm turpentine or warm vinegar is also of great use. If the person feels faint, he should lie quietly on his back, and take a little brandy-and-water, or sal-volatile and water. When the inside of the throat is the part stung, there is great danger of violent inflammation taking place. In this case, from eight to twelve leeches should be immediately put to the outside of the throat, and when they drop off, the part to which they had been applied should be well fomented with warm water. The inside of the throat is to be constantly gargled with salt and water. Bits of ice are to sucked. Rubbing the face and hands well over with plain olive-oil, before going to bed, will often keep gnats and musquitoes from biting during the night. Strong scent, such as eau de Cologne, will have the same effect.

2. *Bites of Snakes.*—These are much more dangerous than the preceding, and require more powerful remedies. The bites of the different kinds of snakes do not all act alike, but affect

people in different ways. *Treatment of the part bitten.*—The great thing is to prevent the poison getting into the blood; and, if possible, to remove the whole of it at once from the body. A pocket-handkerchief, a piece of tape or cord, or, in fact, of anything that is at hand, should be tied tightly round the part of the body bitten; if it be the leg or arm, immediately *above* the bite, and between it and the heart. The bite should then be sucked several times by any one who is near. There is no danger in this, provided the person who does it has not got the skin taken off any part of his mouth. What has been sucked into the mouth should be immediately spit out again. But if those who are near have sufficient nerve for the operation, and a suitable instrument, they should cut out the central part bitten, and then bathe the wound for some time with warm water, to make it bleed freely. The wound should afterwards be rubbed with a stick of lunar caustic, or, what is better, a solution of this — sixty grains of lunar caustic dissolved in an ounce of water—should be dropped into it. The band should be kept on the part during the whole of the time that these means are being adopted. The wound should afterwards be covered with lint dipped in cold water. The best plan, however, to be adopted, if it can be managed, is the following: —Take a common wine-glass, and, holding it upside down, put a lighted candle or a spirit-lamp into it for a minute or two. This will take out the air. Then clap the glass suddenly over the bitten part, and it will become attached, and hold on to the flesh. The glass being nearly empty, the blood containing the poison will, in consequence, flow into it from the wound of its own accord. This process should be repeated three or four times, and the wound sucked, or washed with warm water, before each application of the glass. As a matter of course, when the glass is removed, all the blood should be washed out of it before it is applied again. *Constitutional Treatment.* —There is mostly at first great depression of strength in these cases, and it is therefore requisite to give some stimulant; a glass of hot brandy-and-water, or twenty drops of sal-volatile, is the best that can be given. When the strength has returned, and if the patient has not already been sick, a little mustard in hot water should be given, to make him so. If, on the other hand, as is often the case, the vomiting is excessive, a large mustard poultice should be placed over the stomach, and a grain of solid opium swallowed in the form of a pill, for the purpose of stopping it. Only one of these pills should be given by a non-professional person. In all cases of bites from snakes, send for a surgeon as quickly as possible, and act according to the above directions until he arrives. If he is within any reasonable distance, content yourself by putting on the band, sucking the wound, applying the glass, and if necessary, giving a little brandy-and-water.

3. *Bites of Dogs.*—For obvious reasons, these kinds of bites are more frequently met with than those of snakes. *The treatment* is the same as that for snake-bites, more especially that of the bitten part. The majority of writers on the subject are in favour of keeping the wound open as long as possible. This may be done by putting a few beans on it, and then by applying a large linseed-meal poultice over them.

Injuries and Accidents to Bones.

Dislocation of Bones.—When the end of a bone is pushed out of its natural position, it is said to be dislocated. This may be caused by violence, disease, or natural weakness of the parts about a joint. *Symptoms.*—Deformity about the joint, with unnatural prominence at one part and depression at another. The limb may be shorter or longer than usual, and is stiff and unable to be moved, differing in these last two respects from a broken limb, which is mostly shorter, never longer than usual, and which is always more moveable. *Treatment.*—So much practical science and tact are requisite in

order to bring a dislocated bone into its proper position again, that we strongly advise the reader never to interfere in these cases; unless, indeed, it is altogether impossible to obtain the services of a surgeon. But because any one of us may very possibly be placed in that emergency, we give a few rough rules for the reader's guidance. In the first place make the joint, from which the bone has been displaced, perfectly steady, either by fixing it to some firm object or else by holding it with the hands; then pull the dislocated bone in a direction towards the place from which it has been thrust, so that, if it moves at all from its unnatural position, it may have the best chance of returning to its proper place. Do not, however, pull or press against the parts too violently, as you may, perhaps, by doing so, rupture blood-vessels, and produce most serious consequences. When you *do* attempt to reduce a dislocated bone, do it as quickly as possible after the accident has taken place, every hour making the operation more difficult. When the patient is very strong, he may be put into a warm bath until he feels faint, or have sixty drops of antimonial wine given him every ten minutes until he feels sickish. These two means are of great use in relaxing the muscles. If the bone has been brought back again to its proper place, keep it there by means of bandages; and if there is much pain about the joint, apply a cold lotion to it, and keep it perfectly at rest. The lotion should be, a dessert-spoonful of Goulard's extract, and two table-spoonfuls of vinegar, mixed in a pint of water. Leeches are sometimes necessary. Unless the local pain, or general feverish symptoms, are great, the patient's diet should be the same as usual. Dislocations may be reduced a week, or even a fortnight, after they have taken place. As, therefore, although the sooner a bone is reduced the better, there is no very great emergency, and as the most serious consequences may follow improper or too violent treatment, it is always better for people in these cases to do too little than too much; inasmuch as the good which has not yet may still be done, whereas the evil that *has* been done cannot so easily be undone.

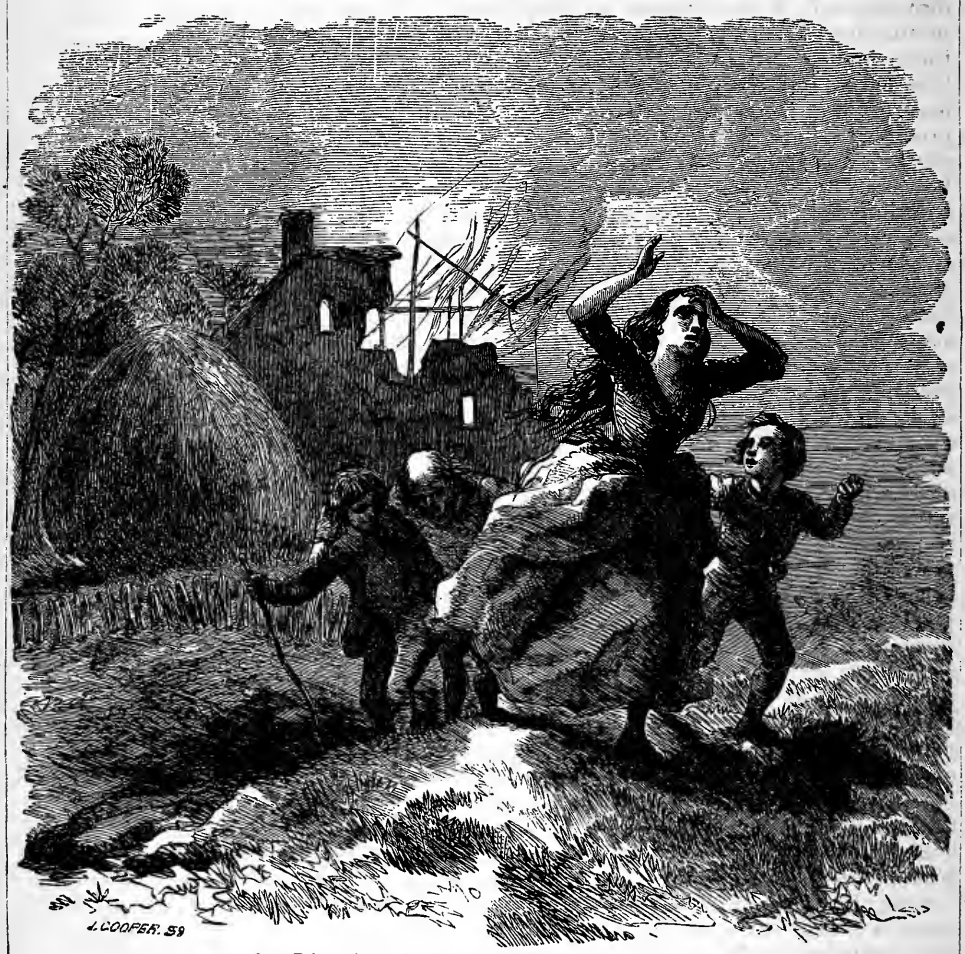
Fractures of Bones. — Symptoms. — 1. Deformity of the part. 2. Unnatural looseness. 3. A grating sound when the two ends of the broken bone are rubbed together. 4. Loss of natural motion and power. In some cases there is also shortening of the limb. — Fracture takes place from several causes, as a fall, a blow, a squeeze, and sometimes from the violent action of muscles. *Treatment.* — In cases where a surgeon cannot be procured immediately after the accident, the following general rules are offered for the reader's guidance: — The broken limb should be placed and kept as nearly as possible in its natural position. This is to be done by first pulling the two portions of the bone in opposite directions, until the limb becomes as long as the opposite one, and then by applying a splint, and binding it to the part by means of a roller. When there is no deformity, the pulling is of course unnecessary. If there is much swelling about the broken part, a cold lotion is to be applied. This lotion (*which we will call lotion No.* 1) may be thus made:—Mix a dessert-spoonful of Goulard's extract and two table-spoonfuls of vinegar in a pint of water. When the leg or arm is broken, always, if possible, get it to the same length and form as the opposite limb. The broken part should be kept perfectly quiet. When a broken limb is deformed, and a particular muscle is on the stretch, place the limb in such a position as will relax it. This will in most cases cure the deformity. Brandy and water, or sal-volatile and water, are to be given when the patient is faint. Surgical aid should, of course, be procured as soon as possible

Joints, Injuries to.—All kinds of injuries to joints, of whatever description, require particular attention, in consequence of the violent inflammations which are so liable to take place in these parts of the body, and

which do so much mischief in a little time. The joint injured should always be kept perfectly at rest; and when it is very painful, and the skin about it red, swollen, hot, and shining, at the same time that the patient has general feverish symptoms, such as great thirst and head-ache—leeches, and when they drop off, warm poppy fomentations, are to be applied; the No. 1 pills above-mentioned are to be given (two are a dose for a grown person) with a black draught three hours afterwards. Give also two tablespoonfuls of the fever-mixture every four hours, and keep the patient on low diet. When the injury and swelling are not very great, warm applications, with rest, low diet, and a dose of aperient medicine, will be sufficient. When a joint has received a penetrating wound, it will require the most powerful treatment, and can only be properly attended to by a surgeon. The patient's friends will have to use their own judgment to a great extent in these and in many other cases, as to when leeches, fever mixture, &c., are necessary. A universal rule, however, without a single exception, *is always to rest a joint well* after it has been injured in any way whatever, to purge the patient, and to keep him on low diet, without beer, unless he has been a very great drinker indeed, in which case he may still be allowed to take a little; for if the stimulant that a person has been accustomed to in excess be all taken away at once, he is very likely to have an attack of delirium tremens. The quantity given should not, however, be much—say a pint, or, at the most, a pint and a half per day. Rubbing the joint with opodeldoc, or the application of a blister to it, is of great service in taking away the thickenings, which often remain after all heat, pain, and redness have left an injured joint. Great care should be observed in not using a joint too quickly after it has been injured. When the shoulder-joint is the one injured, the arm should be bound tightly to the body by means of a linen or flannel roller, and the elbow raised; when the elbow, it should be kept raised in the straight position, on a pillow; when the wrist, it should be raised on the chest, and suspended in a sling; when the knee, it should be kept in the straight position; and, lastly, when the ankle, it should be a little raised on a pillow.

Bruises, Lacerations, and Cuts.—Wherever the bruise may be, or however swollen or discoloured the skin may become, two or three applications of the *extract of lead*, kept to the part by means of lint, will, in an hour or little more, remove all pain, swelling, and tenderness. Simple or clean cuts only require the edges of the wound to be placed in their exact situation, drawn close together, and secured there by one or two slips of adhesive plaster. When the wound, however, is jagged, or the flesh or cuticle lacerated, the parts are to be laid as smooth and regular as possible, and a piece of lint, wetted in the *extract of lead*, laid upon the wound, and a piece of greased lint placed above it to prevent the dressing sticking; the whole covered over to protect from injury, and the part dressed in the same manner once a day till the cure is effected. (See also p. 143).

Bruises and their Treatment.—The best application for a bruise, be it large or small, is moist warmth; therefore, a warm bread-and-water poultice in hot moist flannels should be put on, as they supple the skin. If the bruise be very severe, and in the neighbourhood of a joint, it will be well to apply ten or a dozen leeches over the whole bruised part, and afterwards a poultice. But leeches should not be put on young children. If the bruised part be the knee or the ankle, walking should not be attempted till it can be performed without pain. Inattention to this point often lays the foundation for serious mischief in these joints, especially in the case of scrofulous persons. In all conditions of bruises occurring in children, whether swellings or abrasions, no remedy is so quick or certain of effecting a cure as



(See Directions for Escaping from Fire, p. 391.)

To face p. 173.

the pure extract of lead applied to the part. (See also p. 143.)

Burns and Scalds.

Burns and Scalds being essentially the same in all particulars, and differing only in the manner of their production, may be spoken of together. As a general rule, scalds are less severe than burns, because the heat of water, by which are mostly produced, is not, even when it is boiling, so intense as that of flame; oil, however, and other liquids, whose boiling-point is high, produce scalds of a very severe nature. Burns and scalds have been divided into three classes. The first class comprises those where the burn is altogether superficial, and merely reddens the skin; the second, where the injury is greater, and we get little bladders containing a fluid(called serum) dotted over the affected part; in the third class we get, in the case of burns, a charring, and in that of scalds, a softening or pulpiness, perhaps a complete and immediate separation of the part. This may occur at once, or in the course of a little time. The pain from the second kind of burns is much more severe than that in the other two, although the danger, as a general rule, is less than it is in the third class. These injuries are much more dangerous when they take place on the trunk than when they happen on the arms or legs. The danger arises more from the extent of surface that is burnt than from the depth to which the burn goes. This rule, of course, has certain exceptions; because a small burn on the chest or belly penetrating deeply is more dangerous than a more extensive but superficial one on the arm or leg. When a person's clothes are in flames, the best way of extinguishing them is to wind a rug, or some thick material, tightly round the whole of the body.

Treatment of the First Class of Burns and Scalds.—Of the part affected.—Cover it immediately with a good coating of common flour, or better still with finely-powdered whiting, or cotton-wool with flour dredged well into it. The great thing is to keep the affected surface of the skin from the contact of the air. The part will shortly get well, and the skin may or may not peel off. *Constitutional Treatment.*—If the burn or scald is not extensive, and there is no prostration of strength, this is very simple, and consists in simply giving a little aperient medicine—pills (No. 2), as follows:—Mix 5 grains of blue pill and the same quantity of compound extract of colocynth, and make into two pills—the dose for a full-grown person. Three hours after the pills give a black draught. If there are general symptoms of fever, such as hot skin, thirst, head-ache, &c., &c., two tablespoonfuls of fever-mixture are to be given every four hours. The fever-mixture, we remind our readers, is made thus:—Mix a drachm of powdered nitre, 2 drachms of carbonate of potash, 2 teaspoonfuls of antimonial wine, and a tablespoonful of sweet spirits of nitre, in half a pint of water.

Second Class. Local Treatment.—As the symptoms of these kinds of burns are more severe than those of the first class, so the remedies appropriate to them are more powerful. Having, as carefully as possible, removed the clothes from the burnt surface, and taking care not to break the bladders, spread the following liniment (No. 1) on a piece of linen or lint—not the *fluffy* side—and apply it to the part; the liniment should be equal parts of lime-water and linseed-oil, well mixed. If the burn is on the trunk of the body, it is better to use a warm linseed-meal poultice. After a few days dress the wound with Turner's cerate. If the burn is at the bend of the elbow, place the arm in the *straight* position; for if it is *bent*, the skin, when healed, will be contracted, and the arm, in all probability, always remain in the same unnatural position. This, indeed, applies to all parts of the body; therefore, always place the part affected in the most *stretched* position possible. *Constitutional Treatment.*—

The same kind of treatment is to be used as for the first class, only it must be more powerful. Stimulants are more often necessary, but must be given with great caution. If, as is often the case, there is great irritability and restlessness, a dose of opium (paregoric, in doses of from sixty to a hundred drops, according to age, is best) is of great service. The feverish symptoms will require aperient medicines and the fever-mixture. A drink made of about a tablespoonful of cream of tartar and a little lemon-juice, in a quart of warm water, allowed to cool, is a very nice one in these cases. The diet throughout should not be too low, especially if there is much discharge from the wound. After a few days it is often necessary to give wine, ammonia, and strong beef-tea. These should be had recourse to when the tongue gets dry and dark and the pulse weak and frequent. If there should be, after the lapse of a week or two, pain over one particular part of the belly, a blister should be put on it, and a powder of mercury and chalk—grey powder and Dover's powder (two grains of the former and five of the latter) given three times a day. Affections of the head and chest also frequently occur as a consequence of these kinds of burns, but no one who is not a medical man can treat them.

Third Class.—These are so severe as to make it impossible for a non-professional person to be of much service in attending to them. When they occur a surgeon should always be sent for. Until he arrives, however, the following treatment should be adopted :—Place the patient full length on his back, and keep him warm. Apply fomentations of flannels wrung out of boiling water and sprinkled with spirits of turpentine to the part, and give wine and salvolatile in such quantities as the prostration of strength requires ; always bearing in mind the great fact that you have to steer between two quicksands—death from present prostration and death from future excitement, which will always be increased in proportion to the amount of stimulants given. Give, therefore, only just as much as is absolutely necessary to keep life in the body.

Concussion of Brain—Stunning.—This may be caused by a blow or a fall. *Symptoms*—Cold skin; weak pulse ; almost total insensibility ; slow, weak breathing ; pupil of the eye sometimes bigger, sometimes smaller, than natural ; inability to move ; unwillingness to answer when spoken to. These symptoms come on directly after the accident. *Treatment.*—Place the patient quietly on a warm bed, send for a surgeon, *and do nothing else for the first four or six hours.* After this time the skin will become hot, the pulse full, and the patient feverish altogether. If the surgeon has not arrived by the time these symptoms have set in, shave the patient's head, and apply the following lotion (No. 2) : Mix half an ounce of sal-ammoniac, two tablespoonfuls of vinegar, and the same quantity of gin or whisky, in half a pint of water. Then give this pill (No. 1) : Mix five grains of calomel and the same quantity of antimonial powder with a little bread-crumb, and make into two pills. Give a black draught three hours after the pill, and two tablespoonfuls of the above-mentioned fever-mixture every four hours. Keep on low diet. Leeches are sometimes to be applied to the head. These cases are often followed by violent inflammation of the brain. They can, therefore, only be attended to properly throughout by a surgeon. The great thing for people to do in these cases is—nothing ; contenting themselves with putting the patient to bed, and waiting the arrival of a surgeon.

The Cholera, and Autumnal Complaints.—To oppose cholera, there seems no surer or better means than cleanliness, sobriety, and judicious ventilation. Where there is dirt, that is the place for cholera ; where windows and doors are kept most jealously shut, there cholera will find easiest entrance ; and people who

indulge in intemperate diet during the hot days of autumn, are actually courting death. To repeat it, cleanliness, sobriety, and free ventilation almost always defy the pestilence; but in case of attack, immediate recourse should be had to a physician. The faculty say that a large number of lives have been lost in many seasons solely from delay in seeking medical assistance. They even assert that, taken early, the cholera is by no means a fatal disorder. The copious use of salt is recommended on very excellent authority. Other autumnal complaints there are, of which diarrhœa is the worst example. They come on with pain, flatulence, sickness, with or without vomiting, followed by loss of appetite, general lassitude, and weakness. If attended to at the first appearance they may soon be conquered; for which purpose it is necessary to assist nature in throwing off the contents of the bowels, which may be done by means of the following prescription:—Take of calomel 3 grains, rhubarb 8 grains; mix, and take it in a little honey or jelly, and repeat the dose three times, at the intervals of four or five hours. The next purpose to be answered is the defence of the lining membrane of the intestines from their acrid contents, which will be best effected by drinking copiously of linseed tea, or of a drink made by pouring boiling water on quince-seeds, which are of a very mucilaginous nature; or, what is still better, full draughts of whey. If the complaint continue after these means have been employed, some astringent or binding medicine will be required, as the subjoined:—Take of prepared chalk 2 drachms, cinnamon-water 7 oz., syrup of poppies 1 oz.; mix, and take 3 tablespoonfuls every four hours. Should this fail to complete the cure, ½ oz. of tincture of catechu, or of kino, may be added to it, and then it will seldom fail; or a teaspoonful of kino alone, with a little water, every three hours, till the diarrhœa is checked. While any symptoms of derangement are present, particular attention must be paid to the diet, which should be of a soothing, lubricating, and light nature, as instanced in veal or chicken broth, which should contain but little salt. Rice, batter and bread puddings will be generally relished, and be eaten with advantage; but the stomach is too much impaired to digest food of a more solid nature. Indeed, we should give that organ, together with the bowels, as little trouble as possible, while they are so incapable of acting in their accustomed manner. Much mischief is frequently produced by the absurd practice of taking tincture of rhubarb, which is almost certain of aggravating that species of disorder of which we have now treated; for it is a spirit as strong as brandy, and cannot fail of producing harm upon a surface which is rendered tender by the formation and contact of vitiated bile. But our last advice is, upon the first appearance of such symptoms as are above detailed, have *immediate* recourse to a doctor, where possible.

Ginger Plaster, good for face-ache.—Take a piece of brown paper, cut it the size of the cheek, put it into a saucer, with just enough brandy to soak it—very little brandy will do this; then powder the paper well with powdered or grated ginger; put it on the face cold and wet, and let it remain on till the paper gets dry. You may use this remedy with the greatest safety, putting a plaster on the same part of the face even twice a day without any fear of making the skin tender. When put on at night it will often give sleep and ease when other applications have quite failed to do so, and you need not disturb the sufferer to take off the brown paper when dry; it will do no harm even if it remains on all night. The ginger will not irritate the skin.

Tincture of Arnica for Bruises, &c.—Tincture of arnica is often an excellent remedy for bruises.

Substances in the Eye.—To remove fine particles of gravel, lime, &c., the eye should be syringed with lukewarm water till free from them. Be particular not to worry the eye, under the impression that the sub-

stance is still there, which the enlargement of some of the minute vessels makes the patient believe is actually the case.

Sore Eyes. — Incorporate thoroughly, in a glass mortar or vessel, one part of strong citron ointment with three parts of spermaceti ointment. Use the mixture night and morning, by placing a piece of the size of a pea in the corner of the eye affected.—Only to be used in cases of chronic or long-standing inflammation of the organ, or its lids.

Lime in the Eye.—Bathe the eye with a little weak vinegar and water, and carefully remove any little piece of lime which may be seen, with a feather. If any lime has got entangled in the eyelashes, carefully clear it away with a bit of soft linen soaked in vinegar-and-water. Violent inflammation is sure to follow; a smart purge must be therefore administered, and in all probability a blister must be applied on the temple, behind the ear, or nape of the neck.

Stye in the Eye.—Styes are little abscesses which form between the roots of the eyelashes, and are rarely larger than a small pea. The best way to manage them is to bathe them frequently with warm water, or in warm poppy-water, if very painful. When they have burst, use an ointment composed of one part of citron ointment and four of spermaceti, well rubbed together, and smear along the edge of the eyelid. Give a grain or two of calomel with 5 or 8 grains of rhubarb, according to the age of the child, twice a week. The old-fashioned and apparently absurd practice of rubbing the stye with a ring, is as good and speedy a cure as that by any process of medicinal application; though the number of times it is rubbed, or the quality of the ring and direction of the strokes, has nothing to do with its success. The pressure and the friction excite the vessels of the part, and cause an absorption of the effused matter under the eyelash. The edge of the nail will answer as well as a ring.

Inflammation of the Eyelids.—The following ointment has been found very beneficial in inflammations of the eyeball and edges of the eyelids:—Take of prepared calomel 1 scruple; spermaceti ointment, ½ oz. Mix them well together in a glass mortar: apply a small quantity to each corner of the eye every night and morning, and also to the edges of the lids, if they are affected. If this should not eventually remove the inflammation, elder-flower water may be applied three or four times a day, by means of an eye-cup. The bowels should be kept in a laxative state by taking occasionally a quarter of an ounce of Cream of Tartar or Epsom salts.

Fasting.—It is said by many able physicians that fasting is a means of removing incipient disease, and of restoring the body to its customary healthy sensations. Howard, the celebrated philanthropist (says a writer), used to fast one day in every week. Napoleon, when he felt his system unstrung, suspended his wonted repast, and took his exercise on horseback.

Convulsions.

Convulsions come on so suddenly, often without the slightest warning, and may prove fatal so quickly, that all people should be acquainted at least with their leading symptoms and treatment, as a few moments, more or less, will often decide the question between life and death. The treatment, in very many cases at least, to be of the slightest use, should be *immediate*, as a person in a fit (of apoplexy, for instance) may die while a surgeon is being fetched from only the next street. We shall give, as far as the fact of our editing a work for non-professional readers will permit, the peculiar and distinctive symptoms of the various kinds, and the immediate treatment to be adopted in each case.

Apoplexy.—These fits may be divided into two kinds—the *strong* and the *weak*.

The Strong Kind. — These cases mostly occur in stout, strong, short-necked, bloated-faced people, who are in the habit of living well. *Symptoms.*—The patient may or may not have had headache, sparks before his eyes,

with confusion of ideas and giddiness, for a day or two before the attack. When it takes place he falls down insensible; the body becomes paralyzed, generally more so on one side than the other; the face and head are hot, and the bloodvessels about them swollen; the pupils of the eyes are larger than natural, and the eyes themselves are fixed; the mouth is mostly drawn down at one corner; the breathing is like loud snoring; the pulse full and hard. *Treatment.*—Place the patient immediately in bed, with his head well raised; take off everything that he has round his neck, and bleed freely and at once from the arm. If you have not got a lancet, use a penknife, or anything suitable that may be at hand. Apply warm mustard poultices to the soles of the feet and the insides of the thighs and legs; put two drops of castor oil, mixed up with eight grains of calomel, on the top of the tongue, as far back as possible: a most important part of the treatment being to open the bowels as quickly and freely as possible. The patient cannot swallow; but these medicines, especially the oil, will be absorbed into the stomach altogether independent of any voluntary action. If possible, throw up a warm turpentine clyster (two tablespoonfuls of oil of turpentine in a pint of warm gruel); or, if this cannot be obtained, one composed of about a quart of warm salt-and-water and soap. Cut off the hair, and apply rags dipped in weak vinegar-and-water, or weak gin-and-water, or even simple cold water, to the head. If the bloodvessels about the head and neck are much swollen, put from eight to ten leeches on the temple opposite to the paralyzed side of the body. Always send for a doctor immediately, and act according to the above rules, doing more or less according to the means at hand, and the length of time that must necessarily elapse until he arrives. A pint, or even a quart of blood in a very strong person, may be taken away. When the patient is able to swallow, give him the No. 1 pills, and the No. 1 mixture directly. [The No. 1 pills are made as follows:—Mix 5 grains of calomel and the same quantity of antimonial powder with a little bread-crumb: make into two pills, the dose for a full-grown person. For the No. 1 mixture, dissolve an ounce of Epsom salts in half a pint of senna tea: take a quarter of the mixture as a dose.] Repeat these remedies if the bowels are not well opened. Keep the patient's head well raised, and cool, as above. Give very low diet indeed: gruel, arrowroot, and the like. When a person is recovering, he should have blisters applied to the nape of the neck, his bowels should be kept well open, light diet given, and fatigue, worry, and excess of all kinds avoided.

The Weak Kind. Symptoms.—These attacks are more frequently preceded by warning symptoms than the first kind. The face is pale, the pulse weak, and the body, especially the hands and legs, cold. After a little while, these symptoms sometimes alter to those of the first class in a mild degree. *Treatment.*—At first, if the pulse is *very feebie* indeed, a little brandy-and-water or sal-volatile must be given. Mustard poultices are to be put, as before, to the soles of the feet and the insides of the thighs and legs. Warm bricks, or bottles filled with warm water, are also to be placed under the arm-pits. When the strength has returned, the body become warmer, and the pulse fuller and harder, the head should be shaved, and wet rags applied to it, as before described. Leeches should be put, as before, to the temple opposite the side paralyzed; and the bowels should be opened as freely and as quickly as possible. Bleeding from the arm is often necessary in these cases, but a non-professional person should rarely have recourse to it. Blisters may be applied to the nape of the neck at once. The diet in these cases should not be so low as in the former – indeed, it is often necessary, in a day or so after one of these attacks, to give wine, strong beef-tea, &c., according to the condition of the patient's strength.

Distinctions between Apoplexy and Epilepsy.—1. Apoplexy mostly ha

pens in people *over thirty*, whereas epilepsy generally occurs under that age; at any rate for the first time. A person who has epileptic fits over thirty has generally suffered from them for some years. 2. Again, *in apoplexy* the body is *paralyzed*, and therefore has not the *convulsions which take place in epilepsy*. 3. The peculiar *snoring* will also distinguish apoplexy from epilepsy.

Distinctions between Apoplexy and Drunkenness.—1. The known habits of the person. 2. The fact of a person who was perfectly sober and sensible a little time before being found in a state of insensibility. 3. The absence, in apoplexy, of the *smell of drink* on applying the nose to the mouth. 4. A person in a fit of apoplexy cannot be roused at all; in drunkenness he mostly can, to a certain extent.

Distinction between Apoplexy and Hysterics.—Hysterics mostly happen in young, nervous, unmarried women; and are attended with convulsions, sobbing, laughter, throwing about of the body, &c., &c.

Distinction between Apoplexy and Poisoning by Opium.—It is exceedingly difficult to distinguish between these two cases. In poisoning by opium, however, we find the peculiar smell of the drug in the patient's breath. We should also, in forming our opinion, take into consideration the person's previous conduct — whether he has been low and desponding for some time before, or has ever talked about committing suicide.

Epilepsy. — *Falling Sickness.* — These fits mostly happen, at any rate for the first time, to young people, and are more common in boys than girls. They are produced by numerous causes. *Symptoms.*—The fit may be preceded by pains in the head, palpitations, &c., &c.; but it mostly happens that the person falls down insensible suddenly, and without any warning whatever. The eyes are distorted, so that only their whites can be seen; there is mostly foaming from the mouth; the fingers are clinched; and the body, especially on one side, is much agitated; the tongue is often thrust out of the mouth. When the fit goes off, the patient feels drowsy and faint, and often sleeps soundly for some time. *Treatment.*—During the fit, keep the patient flat on his back, with his head slightly raised, and prevent him from doing any harm to himself; dash cold water into his face, and apply smelling-salts to his nose; loosen his shirt-collar, &c.; hold a piece of wood about as thick as a finger—the handle of a tooth-brush or knife will do as well—between the two rows of teeth, at the back part of the mouth. This will prevent the tongue from being injured. A teaspoonful of common salt thrust into the patient's mouth, during the fit, is of much service. The after-treatment of these fits is various, and depends entirely on their causes. A good general rule, however, is always to keep the bowels well open, and the patient quiet, and free from fatigue, worry, and excess of all kinds.

Fainting Fits are sometimes very dangerous, and at others perfectly harmless; the question of danger depending altogether upon the causes which have produced them, and which are exceedingly various. For instance, fainting produced by disease of the heart is a very serious symptom indeed; whereas that arising from some slight cause, such as the sight of blood, &c., need cause no alarm whatever. The symptoms of simple fainting are so well known that it would be quite superfluous to enumerate them here. The *treatment* consists in laying the patient at full length upon his back, with his head upon a level with the rest of his body, loosening everything about the neck, dashing cold water into the face, and sprinkling vinegar-and-water about the mouth; applying smelling-salts to the nose; and, when the patient is able to swallow, in giving a little warm brandy-and-water, or about 20 drops of sal-volatile in water.

Hysterics.—These fits take place, for the most part, in young, nervous, unmarried women. They happen much less often in married women; and even (in some rare cases indeed) in men.

Young women who are subject to these fits are apt to think that they are suffering from all "the ills that flesh is heir to;" and the false symptoms of disease which they show are so like the true ones, that it is often exceedingly difficult to detect the difference. The fits themselves are mostly preceded by great depression of spirits, shedding of tears, sickness, palpitation of the heart, &c. A pain, as if a nail were being driven in, is also often felt at one particular part of the head. In almost all cases, when a fit is coming on, pain is felt on the left side. The pain rises gradually until it reaches the throat, and then gives the patient a sensation as if she had a pellet there, which prevents her from breathing properly, and, in fact, seems to threaten actual suffocation. The patient now generally becomes insensible, and faints; the body is thrown about in all directions, froth issues from the mouth, incoherent expressions are uttered, and fits of laughter, crying, or screaming, take place. When the fit is going off, the patient mostly cries bitterly, sometimes knowing all, and at others nothing, of what has taken place, and feeling general soreness all over the body. *Treatment during the fit*—Place the body in the same position as for simple fainting, and treat, in other respects, as directed in the article on Epilepsy. *Always well loosen the patient's stays;* and, when she is recovering, and able to swallow, give twenty drops of sal-volatile in a little water. The *after-treatment* of these cases is very various. If the patient is of a strong constitution, she should live on plain diet, take plenty of exercise, and take occasional doses of castor oil, or an aperient mixture. If, as is mostly the case, the patient is weak and delicate, she will require a different mode of treatment altogether. Good nourishing diet, gentle exercise, cold baths, occasionally a dose of myrrh and aloes pills at night, and a dose of compound iron pills twice a day. [As to the myrrh and aloes pills, ten grains made into two pills are a dose for a full grown person. Of the compound iron pills the dose for a full-grown person is also ten grains made into two pills.] In every case, amusing the mind, and avoiding all causes of over-excitement, are of great service in bringing about a permanent cure.

Liver Complaint and Spasms.—The following is recommended from personal experience:—Take four ounces of dried dandelion root, one ounce of the best ginger, a quarter of an ounce of Columba root; bruise and boil altogether in three pints of water till it is reduced to a quart: strain, and take a wine-glassful every four hours. It is a "safe and simple medicine for both liver complaint and spasms."

Lumbago.—A "new and successful mode" of treating Lumbago, advocated by Dr. Day, is a form of counter-irritation, said to have been introduced to general notice by the late Sir Anthony Carlisle, and which consists in the instantaneous application of a flat iron button, gently heated in a spirit-lamp, to the skin. Dr. Corrigan published an account of some cases very successfully treated by nearly similar means. Dr. Corrigan's plan was however, to touch the surface of the part affected, at intervals of half an inch, as lightly and rapidly as possible. Dr. Day has found greater advantages to result from drawing the flat surface of the heated button lightly over the affected part, so as to act on a greater extent of surface. The doctor speaks so enthusiastically of the benefit to be derived from this practice, that it is evidently highly deserving attention.

Indigestion affecting the Heart.—Where palpitation occurs from indigestion, the treatment must be directed to remedy that disorder; when it is consequent on a plethoric state, purgatives will be effectual. In this case the patient should abstain from every kind of diet likely to produce a plethoric condition of body. Animal food and fermented liquor must be particularly avoided. Too much indulgence in sleep will also prove injurious. When the attacks arise from nervous irritability, the ex-

citement must be allayed by change of air, and a tonic diet. Should the palpitation originate from organic derangement, it must be, of course, beyond domestic management. Luxurious living, indolence, and tight-lacing often produce this affection: such cases are to be conquered with a little resolution.

Poisons

shall be the next subject for remark; and we anticipate more detailed instructions for the treatment of persons poisoned, by giving a simple LIST OF THE PRINCIPAL POISONS, with their ANTIDOTES or REMEDIES.

Oil of Vitriol, Aquafortis, Spirit of Salt	Magnesia, Chalk, Soap-and-Water.
Tartar Emetic	Oily Drinks, Solution of Oak-bark.
Salt of Lemons, or Acid of Sugar	Chalk, Whiting, Lime, or Magnesia and Water. Sometimes an Emetic Draught.
Prussic Acid	Pump on back, Smelling Salts to nose, Artificial Breathing, Chloride of Lime to nose.
Pearl-ash, Soap-Lees, Smelling-Salts, Nitre, Hartshorn, Sal-Volatile	Lemon-juice, and Vinegar-and-Water.
Arsenic, Fly-Powder, or White Arsenic, King's Yellow, or Yellow Arsenic	Emetics, Lime-Water, Soap-and-Water, Sugar-and-Water, Oily Drinks.
Mercury, Corrosive Sublimate, Calomel	Whites of Eggs, Soap-and-Water.
Opium, Laudanum	Emetic Draught, Vinegar-and-Water, dashing Cold Water on chest and face, walking up and down for two or three hours.
Lead, White Lead, Sugar of Lead, Goulard's Extract	Epsom Salts, Castor Oil, Emetics.
Copper, Blue-stone, Verdigris	Whites of Eggs, Sugar-and-Water, Castor Oil, Gruel.
Zinc	Lime-Water, Chalk-and-Water, Soap-and-Water.
Iron	Magnesia, Warm Water.
Henbane, Hemlock, Nightshade, Foxglove	Emetics and Castor Oil; Brandy-and-Water, if necessary.
Poisonous Food	Emetics and Castor Oil.

The symptoms of poisoning may be known for the most part from those of some diseases which they are very like, from the fact of their coming on *immediately* after eating or drinking something; whereas those of disease come on, in most cases at least, by degrees, and with warnings. In most cases where poison is known, or suspected to have been taken, the first thing to be done is to empty the stomach well and immediately, by means of mustard mixed in warm water, or plain warm salt-and-water, or, better, this draught, which we call No. 1:—Twenty grains of sulphate of zinc in an ounce and a half of water. This draught to be repeated in a quarter of an hour if vomiting does not ensue. The back part of the throat should be well tickled with a feather, or two of the fingers thrust down it, to induce vomiting. The cases where vomiting must not be used are those where the skin has been taken off, and the parts touched irritated and inflamed by the poison taken, and where the action of vomiting would increase the evil. Full instructions are given in the article on each particular poison as to where emetics are or are not to be given. The best and safest way of emptying the stomach is by means of the stomach-pump, as in certain cases the action of vomiting is likely to increase the danger arising from the swollen and congested condition of the blood-vessels of the head, which often takes place. In the hands, however, of any one else than a surgeon, it would be not only useless, but harmful, as a great deal of dexterity, caution, and experience are required to use it properly. After having made these brief introductory remarks, we shall now proceed to particulars.

Sulphuric Acid, or *Oil of Vitriol* (a clear, colourless liquid, of an oily appearance).—*Symptoms in those who have swallowed it.*—When much is taken, these come on immediately. There is great burning pain, extending from the mouth to the stomach; vomiting of a liquid of a dark coffee-colour, often mixed with shreds of flesh and streaks of blood; the skin inside the mouth is taken off, and the exposed surface is at first white, and after a time becomes brownish. There are sometimes spots of a brown colour round the lips and on the neck, caused by drops of the acid falling on these parts. There is great difficulty of breathing, owing to the swelling at the back part of the mouth. After a time there is much depression of strength, with a quick, weak pulse, and cold, clammy skin. The face is pale, and has a very anxious look. When the acid swallowed has been greatly diluted in water, the same kind of symptoms occur, only in a milder degree. *Treatment.*—Give a mixture of magnesia in milk-and-water, or, if this cannot be obtained, of finely-powdered chalk, or whiting, or even of the plaster torn down from the walls or ceiling, in milk-and-water. The mixture should be nearly as thick as cream, and plenty of it given. As well as this, simple gruel, milk, or thick flour-and-water, are very useful, and should be given in large quantities. Violent inflammation of the parts touched by the acid is most likely to take place in the course of a little time, and can only be properly attended to by a surgeon; but if one cannot be obtained, leeches, the fever mixtures (the recipe for which appears repeatedly in previous paragraphs), thick drinks, such as barley-water, gruel, arrowroot, &c., must be had recourse to, according to the symptoms of each particular case, and the means at hand. The inflamed condition of the back part of the mouth requires particular attention. When the breathing is very laboured, and difficult in consequence, from fifteen to twenty leeches are to be immediately applied to the outside of the throat, and when they drop off, warm poppy fomentations constantly kept to the part. When the pain over the stomach is very great, the same local treatment is necessary; but if it is only slight, a good mustard poultice will be sufficient without the leeches. In all these cases, two tablespoonfuls of the fever mixture should be given

every four hours, and only gruel or arrowroot allowed to be eaten for some days.

Nitric Acid, commonly known as *Aqua Fortis*, or *Red Spirit of Nitre* (a straw-coloured fluid, of the consistence of water, and which gives off dense white fumes on exposure to the air). *Symptoms produced in those who have swallowed it.*—Much the same as in the case of sulphuric acid. In this case, however, the surface touched by the acid becomes *yellowish*. The tongue is mostly much swollen. *Treatment.*—The same as for sulphuric acid.

Muriatic Acid, Spirit of Salt (a thin yellow fluid, emitting dense white fumes on exposure to the air).—This is not often taken as a poison. The *symptoms* and *treatment* are much the same as those of *nitric acid*.

N.B.—*In no case of poisoning by these three acids should emetics ever be given.*

Oxalic Acid, commonly called *Salt of Lemons*. — This poison may be taken by mistake for Epsom salts, which it is a good deal like. It may be distinguished from them by its very acid taste and its shape, which is that of needle-formed crystals, each of which, if put into a drop of ink, will turn it to a *reddish brown*, whereas Epsom salts will not change its colour at all. When a large dose of this poison has been taken, death takes place very quickly indeed. *Symptoms produced in those who have swallowed it.* — A hot, burning, acid taste is felt in the act of swallowing, and vomiting of a *greenish brown* fluid is produced, sooner or later, according to the quantity and strength of the poison taken. There is great tenderness felt over the stomach, followed by clammy perspirations and convulsions; the legs are often drawn up, and there is generally stupor, from which the patient, however, can easily be roused, and always great prostration of strength. The pulse is small and weak, and the breathing faint. *Treatment.* — Chalk or magnesia, made into a cream with water, should be given in large quantities, and afterwards the emetic draught above prescribed, or some mustard-and-water, if the draught cannot be got. The back part of the throat to be tickled with a feather, to induce vomiting. Arrowroot, gruel, and the like drinks are to be taken. When the prostration of strength is very great and the body cold, warmth is to be applied to it, and a little brandy-and-water, or sal-volatile and water, given.

Prussic Acid (a thin, transparent, and colourless liquid, with a peculiar smell, which greatly resembles that of bitter almonds). *Symptoms produced in those who have swallowed it.*—These come on *immediately* after the poison has been taken, and may be produced by merely *smelling* it. The patient becomes perfectly insensible, and falls down in convulsions — his eyes are fixed and staring, the pupils being bigger than natural, the skin is cold and clammy, the pulse scarcely perceptible, and the breathing slow and gasping. *Treatment.*—Very little can be done in these cases, as death takes place so quickly after the poison has been swallowed, when it takes place at all. The best treatment — which should always be adopted in all cases, even though the patient appears quite dead—is to dash quantities of cold water on the back, from the top of the neck downwards. Placing the patient under a pump, and pumping on him, is the best way of doing this. Smelling salts are also to be applied to the nose, and the chest well rubbed with a camphor liniment.

Alkalies.—*Potash, Soda*, and *Ammonia*, or common *Smelling Salts*, with their principal preparations — *Pearl-ash, Soap Lees, Liquor Potassæ, Nitre, Sal Prunella, Hartshorn*, and *Sal-Volatile*. Alkalies are seldom taken or given with the view of destroying life. They may, however, be swallowed by mistake. *Symptoms produced in those who have swallowed them.* — There is at first a burning, acrid taste in, and a sensation of tightness round, the throat, like that of strangling; the skin touched is destroyed; retching, mostly followed by actual vomiting, then sets in; the vomited matters often containing blood of a dark brown colour, with little shreds of flesh here

and there, and always changing vegetable blue colours green. There is now great tenderness over the whole of the belly. After a little while, great weakness, with cold, clammy sweats, a quick weak pulse, and purging of bloody matters, takes place. The brain, too, mostly becomes affected. *Treatme* .. - Give two tablespoonfuls of vinegar or lemon-juice in a glassful of water every few minutes until the burning sensation is relieved. Any kind of oil or milk may also be given, and will form soap when mixed with the poison in the stomach. Barley-water, gruel, arrowroot, linseed-tea, &c., are also very useful, and should be taken constantly, and in large quantities. If inflammation should take place, it is to be treated by applying leeches and warm poppy fomentations to the part where the pain is most felt, and giving two tablespoonfuls of the fever-mixture every four hours. The diet in all these cases should only consist of arrowroot or gruel for the first few days, and then of weak broth or beef-tea for some time after.

When very strong fumes of smelling-salts have in any way been inhaled, there is great difficulty of breathing, and alarming pain in the mouth and nostrils. In this case let the patient inhale the steam of warm vinegar, and treat the feverish symptoms as before.

Arsenic. — Mostly seen under the form of white arsenic, or fly-powder, and yellow arsenic, or king's yellow. *Symptoms produced in those who have swallowed it.*—These vary much, according to the form and dose in which the poison has been taken. There is faintness, depression, and sickness, with an intense burning pain in the region of the stomach, which gets worse and worse, and is increased by pressure. There is also vomiting of dark brown matter, sometimes mixed with blood; and mostly great thirst, with a feeling of tightness round, and of burning in, the throat. Purging also takes place, the matters brought away being mixed with blood. The pulse is small and irregular, and the skin sometimes cold and clammy, and at others hot. The breathing is painful. Convulsions and spasms often occur. *Treatment.*—Give a couple of teaspoonfuls of mustard in a glass of water, to bring on or assist vomiting, and also use the other means elsewhere recommended for the purpose. A solution, half of lime-water and half of linseed-oil, well mixed, may be given, as well as plenty of arrowroot, gruel, or linseed-tea. Simple milk is also useful. A little castor-oil should be given, to cleanse the intestines of all the poison, and the after-symptoms treated on general principles.

Corrosive Sublimate. — Mostly seen in the form of little heavy crystalline masses, which melt in water, and have a metallic taste. It is sometimes seen in powder. This is a most powerful poison. *Symptoms.* — These mostly come on *immediately* after the poison has been taken. There is a coppery taste experienced in the act of swallowing, with a burning heat, extending from the top of the throat down to the stomach; and also a feeling of great tightness round the throat. In a few minutes great pain is felt over the region of the stomach, and frequent vomiting of long, stringy, white masses, mixed with blood, takes place. There is also mostly great purging. The countenance is generally pale and anxious; the pulse always small and frequent; the skin cold and clammy, and the breathing difficult. Convulsions and insensibility often occur, and are very bad symptoms indeed. The inside of the mouth is more or less swollen. *Treatment.*—Mix the whites of a dozen eggs in two pints of cold water, and give a glassful of the mixture every three or four minutes, until the stomach can contain no more. If vomiting does not now come on naturally, and supposing the mouth is not very sore or much swollen, an emetic draught, No. 1, may be given, and vomiting induced. [The No. 1 draught, we remind our readers, is thus made: —Twenty grains of sulphate of zinc in an ounce and a half of water; the draught to be repeated if vomiting does not take place in a quarter of an hour.] After the stomach has been

well cleaned out, milk, flour-and-water, linseed-tea, or barley-water, should be taken in large quantities. If eggs cannot be obtained, milk, or flour-and-water, should be given as a substitute for them at once. When the depression of strength is very great indeed, a little warm brandy-and-water must be given. In the course of an hour or two the patient should take two tablespoonfuls of castor-oil, and if inflammation comes on, it is to be treated as directed in the article on acids and alkalies. The diet should also be the same. If the patient recovers, great soreness of the gums is almost certain to take place. The simplest, and at the same time one of the best modes of treatment, is to wash them well three or four times a day with brandy-and-water.

Calomel.—A heavy white powder, without taste, and insoluble in water. It has been occasionally known to destroy life. *Symptoms.* — Much the same as in the case of corrosive sublimate. *Treatment.*—The same as for corrosive sublimate. If the gums are sore, wash them, as recommended in the case of corrosive sublimate, with brandy-and-water three or four times a day, and keep the patient on *fluids*, such as arrowroot, gruel, broth, or beef-tea, according to the other symptoms. Eating hard substances would make the gums more sore and tender.

Copper.—The preparations of this metal which are most likely to be the one producing poisonous symptoms, are *blue-stone* and *verdigris*. People are often taken ill after eating food that has been cooked in copper saucepans. When anything has been cooked in one of these vessels, *it should never be allowed to cool in it. Symptoms.*—Headache, pain in the stomach, and purging; vomiting of green or blue matters, convulsions, and spasms. *Treatment.* — Give whites of eggs, sugar-and-water, castor-oil, and drinks such as arrowroot and gruel.

Tartar Emetic.—Seen in the form of a white powder, or crystals, with a slightly metallic taste. It has not often been known to destroy life. *Symptoms.*—A strong metallic taste in the act of swallowing, followed by a burning pain in the region of the stomach, vomiting, and great purging. The pulse is small and rapid, the skin cold and clammy, the breathing difficult and painful, and the limbs often much cramped. There is also great prostration of strength. *Treatment.*—Promote the vomiting by giving plenty of warm water, or warm arrowroot and water. Strong tea, in large quantities, should be drunk; or, if it can be obtained, a decoction of oak-bark. The after-treatment is the same as that for acids and alkalies; the principal object in all these cases being to keep down the inflammation of the parts touched by the poison by the means of leeches, warm poppy fomentations, fever mixtures, and very low diet.

Lead, and its preparations, *Sugar of Lead, Goulard's Extract, White Lead.*—Lead is by no means an active poison, although it is popularly considered to be so. It mostly affects people by being taken into the system slowly, as in the case of painters and glaziers. A newly-painted house, too, often affects those living in it. *Symptoms produced when taken in a large dose.* — There is at first a burning, prickling sensation in the throat, to which thirst, giddiness, and vomiting follow. The belly is tight, swollen, and painful; *the pain being relieved by pressure.* The bowels are mostly bound. There is great depression of strength, and a cold skin. *Treatment.*—Give an emetic draught (No. 1, see above) at once, and shortly afterwards a solution of Epsom salts in large quantities. A little brandy-and-water must be taken if the depression of strength is very great indeed. Milk, whites of eggs, and arrowroot are also useful. After two or three hours, cleanse the stomach and intestines well out with two tablespoonfuls of castor-oil, and treat the symptoms which follow according to the rules laid down in other parts of these articles. *Symptoms when it is taken into the body slowly.*—Headache, pain about the navel, loss of appetite and flesh, offensive breath, a *blueness of the edges of the gums;* the

belly is tight, hard, and knotty, and the pulse slow and languid. There is also sometimes a difficulty in swallowing. *Treatment.*—Give five grains of calomel and half a grain of opium directly, in the form of a pill, and half an ounce of Epsom salts in two hours, and repeat this treatment until the bowels are well opened. Put the patient into a warm bath, and throw up a clyster of warmish water when he is in it. Fomentations of warm oil of turpentine, if they can be obtained, should be put over the whole of the belly. The great object is to open the bowels as freely and as quickly as possible. When this has been done, a grain of pure opium may be given. Arrowroot or gruel should be taken in good large quantities. The after-treatment must depend altogether upon the symptoms of each particular case.

Opium, and its preparations, *Laudanum, &c.*—Solid opium is mostly seen in the form of rich brown flattish cakes, with little pieces of leaves sticking on them here and there, and has a bitter and slightly warm taste. The most common form in which it is taken as a poison, is that of laudanum. *Symptoms.*—These consist at first in giddiness and stupor, followed by insensibility, the patient, however, being roused to consciousness by a great noise, so as to be able to answer a question, but becoming insensible again almost immediately. The pulse is now quick and small, the breathing hurried and the skin warm and covered with perspiration. After a little time, these symptoms change; the person becomes *perfectly insensible*, the breathing slow and *snoring*, as in apoplexy, the skin cold, and the pulse slow and full. The pupil of the eye is mostly smaller than natural. On applying his nose to the patient's mouth, a person may smell the poison very distinctly. *Treatment.*—Give an emetic draught (No. 1, see above) directly, with large quantities of warm mustard-and-water, warm salt-and-water, or simple warm water. Tickle the top of the throat with a feather, or put two fingers down it to bring on vomiting, which rarely takes place of itself. Dash cold water on the head, chest, and spine, and flap these parts well with the ends of wet towels. Give strong coffee or tea. Walk the patient up and down in the open air for two or three hours; the great thing being to keep him from sleeping. Electricity is of much service. When the patient is recovering, mustard poultices should be applied to the soles of the feet and the inside of the thighs and legs. The head should be kept cool and raised.

The following preparations, which are constantly given to children by their nurses and mothers, for the purpose of making them sleep, often prove fatal:—*Soothing Syrup* and *Godfrey's Cordial.* The author would most earnestly urge all people caring for their children's lives never to allow any of these preparations to be given unless ordered by a doctor.

The treatment in the case of poisoning by *Henbane, Hemlock, Night-shade*, and *Foxglove* is much the same as that for opium. Vomiting should be brought on in all of them.

Poisonous Food.—It sometimes happens that things which are in daily use, and most perfectly harmless, give rise, under certain unknown circumstances and in certain individuals, to the symptoms of poisoning. The most common articles of food of this description are *Mussels, Salmon*, and certain kinds of *Cheese* and *Bacon.* The general symptoms are thirst, weight about the stomach, difficulty of breathing, vomiting, purging, spasms, prostration of strength, and, in the case of mussels more particularly, an eruption on the body, like that of nettle-rash. *Treatment.*—Empty the stomach well with No. 1 draught and warm water, and give two tablespoonfuls of castor-oil immediately after. Let the patient take plenty of arrowroot, gruel, and the like drinks, and if there is much depression of strength, give a little warm brandy-and-water. Should symptoms of fever or inflammation follow, they must be treated as directed in the articles on other kinds of poisoning.

Mushrooms, and similar kinds of vegetables, often produce poisonous effects. The symptoms are various,

sometimes giddiness and stupor, and at others pain in and swelling of the belly, with vomiting and purging, being the leading ones. When the symptoms come on quickly after taking the poison, it is generally the head that is affected. The treatment consists in bringing on vomiting in the usual manner, as quickly and as freely as possible. The other symptoms are to be treated on general principles; if they are those of depression, by brandy-and-water or sal-volatile; if those of inflammation, by leeches, fomentations, fever-mixtures, &c., &c.

For Cure of Ringworm.—Take of subcarbonate of soda 1 drachm, which dissolve in ½ pint of vinegar. Wash the head every morning with soft soap, and apply the lotion night and morning. One teaspoonful of sulphur and treacle should also be taken occasionally night and morning, the hair should be cut close, and round the spot it should be shaved off, and the part, night and morning, bathed with a lotion made by dissolving a drachm of white vitriol in 6 oz. of water. A small piece of either of the two subjoined ointments rubbed into the part when the lotion has dried in. No. 1.—Take of citron ointment 1 drachm; sulphur and tar ointment, of each ½ oz.: mix thoroughly, and apply twice a day. No. 2.—Take of simple cerate 1 oz.; creosote 1 drachm; calomel 30 grains: mix and use in the same manner as the first. Concurrent with these external remedies, the child should take an alterative powder every morning; or, if they act too much on the bowels, only every second day. The following will be found to answer all the intentions desired:—

Alterative Powders for Ringworm.

Take of

	Grains.
Sulphuret of antimony, precipitated	24
Grey powder	12
Calomel	6
Jalap powder	36

Mix carefully, and divide into 12 powders for a child from 1 to 2 years old; into 9 powders for a child from 2 to 4 years; and into 6 powders for a child from 4 to 6 years. Where the patient is older, the strength may be increased by enlarging the quantities of the drugs ordered, or by giving one and a half or two powders for one dose. The ointment is to be well washed off every morning with soap-and-water, and the part bathed with the lotion before re-applying the ointment. An imperative fact must be remembered by mother or nurse,—never to use the same comb employed for the child with ringworm for the healthy children, nor let the affected little one sleep with those free from the disease; and, for fear of any contact by hands or otherwise, to keep the child's head enveloped in a nightcap till the eruption is completely cured.

Scratches.—Trifling as scratches often seem, they ought never to be neglected, but should be covered and protected, and kept clean and dry until they have completely healed. If there is the least appearance of inflammation, no time should be lost in applying a large bread-and-water poultice, or hot flannels repeatedly applied, or even leeches in good numbers may be put on at some distance from each other.

For Shortness of Breath, or Difficult Breathing.—Vitriolated spirits of ether 1 oz., camphor 12 grains; make a solution, of which take a teaspoonful during the paroxysm. This is found to afford instantaneous relief in difficulty of breathing, depending on internal diseases and other causes, where the patient, from a very quick and laborious breathing, is obliged to be in an erect posture.

Strains of the Ankle, Wrist, and other Joints through violence, such as slipping, falling on the hands, pulling a limb, &c., &c. The most common are those of the ankle and wrist. These accidents are more serious than people generally suppose, and often more difficult to cure than a broken leg or arm. The first thing to be done is to place the sprained part in the straight position, and to raise it a little as well. Some recommend the application of cold lotions at first. Physicians, how-

ever, are quite convinced that *warm* applications are, in most cases, the best for the first three or four days. These fomentations are to be applied in the following manner :—Dip a good-sized piece of flannel into a pail or basin full of hot water or hot poppy fomentation,—six poppy heads boiled in one quart of water for about a quarter of an hour ; wring it almost dry, and apply it, as hot as the patient can bear, right round the sprained part. Then place another piece of flannel, quite dry, over it, in order that the steam and warmth may not escape. This process should be repeated as often as the patient feels that the flannel next to his skin is getting cold—the oftener the better. The bowels should be opened with a black draught, and the patient kept on low diet. If he has been a great drinker, he may be allowed to take a little beer ; but it is better not to do so. A little of the cream of tartar drink ordered in the case of burns may be taken occasionally, if there is much thirst. When the swelling and tenderness about the joint are very great, from eight to twelve leeches may be applied. When the knee is the joint affected, the greatest pain is felt at the inside, and therefore the greater quantity of the leeches should be applied to that part. When the shoulder is sprained, the arm should be kept close to the body by means of a linen roller, which is to be taken four or five times round the whole of the chest. It should also be brought two or three times underneath the elbow, in order to raise the shoulder. This is the best treatment for these accidents during the first three or four days. After that time, supposing that no unfavourable symptoms have taken place, a cold lotion, composed of a tablespoonful of sal-ammoniac to a quart of water, or vinegar-and-water, should be constantly applied. This lotion will strengthen the part, and also help in taking away any thickening that may have formed about the joint. In the course of two or three weeks, according to circumstances, the joint is to be rubbed twice a day with flannel dipped in opodeldoc, a flannel bandage rolled tightly round the joint, the pressure being greatest at the lowest part, and the patient allowed to walk about with the assistance of a crutch or stick. He should also occasionally, when sitting or lying down, quietly bend the joint backwards and forwards, to cause its natural motion to return, and to prevent stiffness from taking place. When the swelling is very great immediately after the accident has occurred, from the breaking of the blood-vessels, it is best to apply cold applications at first. If it can be procured, oil-silk may be put over the warm-fomentation flannel, instead of the dry piece of flannel. Old flannel is better than new.—THE BALLET GIRLS' CURE for sprained or strained ankles. Plunge the foot affected into hot water at once, and add from a bottle water as hot as can be borne; continue this for ten minutes. Have a pail of cold water ready, remove the foot from the hot water and hold it in the cold for four minutes ; now bind it tightly with a wet bandage and place a dry one over.

To Prevent Pitting after Small Pox.—Spread a sheet of thin leather with the ointment of ammoniacum with mercury, and cut out a place for the mouth, eyes, and nostrils. After anointing the eyelids with a little blue ointment, apply this mask to the face and allow it to remain for three days for the distinct kind, and five days for the running kind. It must be applied *before* the spots fill with matter, although it answers, in some cases, even afterwards.

Another method is to touch each pustule or pock with a camel-hair pencil dipped in a solution of lunar caustic of the strength of two grains to the ounce of distilled water. Or a needle may be passed through each pock when distended by matter.

Suffocation, Apparent.—Suffocation may arise from many different causes. Anything which prevents the air getting into the lungs will produce it. We shall give the principal causes and the treatment to be followed in each case.

1. *Carbonic Acid Gas. Choke-Damp*

of Mines.—This poisonous gas is met with in rooms where charcoal is burnt, and where there is not sufficient draught to allow it to escape ; in coal-pits, near limekilns, in breweries, and in rooms and houses where a great many people live huddled together in wretchedness and filth, and where the air in consequence becomes poisoned. This gas gives out no smell, so that we cannot know of its presence. A candle will not burn in a room which contains much of it. *Effects.*—At first there is giddiness, and a great wish to sleep ; after a little time, or where there is much of it present, a person feels great weight in the head, and stupid ; gets by degrees quite unable to move, and snores as if in a deep sleep. The limbs may or may not be stiff. The heat of the body remains much the same at first. *Treatment.*—Remove the person affected into the open air, and, even though it is cold weather, take off his clothes. Then lay him on his back, with his head slightly raised. Having done this, dash vinegar-and-water over the whole of the body, and rub it hard, especially the face and chest, with towels dipped in the same mixture. The hands and feet also should be rubbed with a hard brush. Apply smelling-salts to the nose, which may be tickled with a feather. Dashing cold water down the middle of the back is of great service. If the person can swallow, give him a little lemon-water, or vinegar-and-water to drink. The principal means, however, to be employed in this, as, in fact, in most cases of apparent suffocation, is what is called *artificial breathing.* This operation should be performed by three persons, and in the following manner :—The first person should put the nozzle of a common pair of bellows into one of the patient's nostrils; the second should push down, and then thrust back, that part of the throat called "Adam's apple ;" and the third should first raise and then depress the chest, one hand being placed over each side of the ribs. These three actions should be performed in the following order :—First of all, the throat should be drawn down and thrust back ; then the chest should be raised, and the bellows gently blown into the nostril. Directly this is done, the chest should be depressed, so as to imitate common breathing. This process should be repeated about eighteen times a minute. The mouth and the other nostril should be closed while the bellows are being blown. Persevere, if necessary, with this treatment for seven or eight hours—in fact, till absolute signs of death are visible. Many lives are lost by giving it up too quickly. When the patient becomes roused, he is to be put into a warm bed, and a little brandy-and-water, or twenty drops of sal-volatile, given cautiously now and then. This treatment is to be adopted in all cases where people are affected from breathing bad air, smells, &c., &c.

2. *Drowning.*—This is one of the most frequent causes of death by suffocation. *Treatment.*—Many methods have been adopted, and as some of them are not only useless, but hurtful, we will mention them here, merely in order that they may be avoided. In the first place, then, never hang a person up by his heels, as it is an error to suppose that water gets into the lungs. Hanging a person up by his heels would be quite as bad as hanging him up by his neck. It is also a mistake to suppose that rubbing the body with salt and water is of service. *Proper Treatment.*—Directly a person has been taken out of the water, he should be wiped dry and wrapped in blankets ; but if these cannot be obtained, the clothes of the bystanders must be used for the purpose. His head being slightly raised, and any water, weeds, or froth that may happen to be in his mouth, having been removed, he should be carried as quickly as possible to the nearest house. He should now be put into a warm bath, about as hot as the hand can pleasantly bear, and kept there for about ten minutes, artificial breathing being had recourse to while he is in it. Having been taken out

of the bath, he should be placed flat on his back, with his head slightly raised, upon a warm bed in a warm room, wiped perfectly dry, and then rubbed constantly all over the body with warm flannels. At the same time, mustard poultices should be put to the soles of the feet, the palms of the hands, and the inner surface of the thighs and legs. Warm bricks, or bottles filled with warm water, should be placed under the armpits. The nose should be tickled with a feather, and smelling-salts applied to it. This treatment should be adopted while the bath is being got ready, as well as when the body has been taken out of it. The bath is not absolutely necessary; constantly rubbing the body with flannels in a warm room having been found sufficient for resuscitation. Sir B. Brodie says that warm air is quite as good as warm water. When symptoms of returning consciousness begin to show themselves, give a little wine, brandy, or twenty drops of sal-volatile and water. In some cases it is necessary, in about twelve or twenty-four hours after the patient has revived, to bleed him, for peculiar head symptoms which now and then occur. Bleeding, however, in the hands of professional men themselves, should be very cautiously used—non-professional ones should never think of it. The best thing to do in these cases is to keep the head well raised, and cool with a lotion such as that recommended above for strains; to administer an aperient draught, and to abstain from giving anything that stimulates, such as wine, brandy, sal-volatile, &c., &c. As a general rule, a person dies in three minutes and a half after he has been under water. It is difficult however, to tell how long he has actually been *under* it, although we may know well exactly how long he has been *in* it. This being the case, always persevere in your attempts at resuscitation until actual signs of death have shown themselves, even for six, eight, or ten hours. Dr. Douglas, of Glasgow, resuscitated a person who had been under water for fourteen minutes, by simply rubbing the whole of his body with warm flannels, in a warm room, for eight hours and a half, at the end of which time the person began to show the *first* symptoms of returning animation. Should the accident occur at a great distance from any house, this treatment should be adopted as closely as the circumstances will permit of. Breathing through any tube, such as a piece of card or paper rolled into the form of a pipe, will do as a substitute for the bellows. To recapitulate: Rub the body dry; take matters out of mouth; cover with blankets or clothes; slightly raise the head, and place the body in a warm bath, or on a bed in a warm room; apply smelling-salts to nose; employ artificial breathing; rub well with warm flannels; put mustard to feet, hands, and insides of thighs and legs, with warm bricks or bottles to armpits. *Don't bleed.* Give wine, brandy, or sal-volatile when recovering, and *persevere till actual signs of death are seen.* (See for further directions, p. 148.)

Briefly to conclude what we have to say of suffocation, let us treat of *Lightning.* When a person has been struck by lightning, there is a general paleness of the whole body, with the exception of the part struck, which is often blackened, or even scorched. *Treatment.*—Same as for drowning. It is not, however, of much use; for when death takes place at all, it is generally instantaneous.

Another Cure for the Toothache.—Take a piece of sheet zinc, about the size of a sixpence, and a piece of silver, say a coin; place them together, and hold the defective tooth between them or contiguous to them; in a few minutes the pain will be gone, as if by magic. The zinc and silver, acting as a galvanic battery, will produce on the nerves of the tooth sufficient electricity to establish a current, and consequently to relieve the pain. Or smoke a pipe of tobacco and caraway-seeds. Again—

A small piece of the pellitory root will, by the flow of saliva it causes, afford relief. Creosote, or a few drops of tincture of myrrh, or friar's balsam

on cotton, put on the tooth, will often subdue the pain. A small piece of camphor, however, retained in the mouth, is the most reliable and likely means of conquering the paroxysms of this dreaded enemy.

Another Cure for Warts.—Eisenberg says, that the hydrochlorate of lime is the most certain means of destroying warts; the process, however, is very slow, and demands perseverance, for, if discontinued before the proper time, no advantage is gained. The following is a simple cure :—On breaking the stalk of the crowfoot plant in two, a drop of milky juice will be observed to hang on the upper part of the stem; if this be allowed to drop on a wart, so that it be well saturated with the juice, in about three or four dressings the warts will die, and may be taken off with the fingers. They may be removed by the above means from the teats of cows, where they are sometimes very troublesome, and prevent them standing quiet to be milked. Touching lightly every second day with lunar caustic, or rubbing every night with blue-stone for a few weeks, will destroy the largest wart, wherever situated.

Another Cure for Whitlow.—When the whitlow has risen distinctly, a pretty large piece should be snipped out, so that the watery matter may readily escape, and continue to flow out as fast as produced. A bread-and-water poultice should be put on for a few days, when the wound should be bound up lightly with some mild ointment, when a cure will be speedily completed. Constant poulticing both before and after the opening of the whitlow, is the only practice needed; but as the matter lies deep, when it is necessary to open the abscess, the incision must be made *deep* to reach the suppuration.

Cuts and Lacerations.—There are several kinds of wounds, called by different names, according to their appearance, or the manner in which they are produced. As, however, it would be useless, and even hurtful, to bother the reader's head with too many nice professional distinctions, we shall content ourselves with dividing wounds into three classes.

1. *Incised wounds, or cuts*—those produced by a knife, or some sharp instrument.

2. *Lacerated or torn wounds*—those produced by the claws of an animal, the bite of a dog, running quickly against some projecting blunt object, such as a nail, &c.

3. *Punctured or penetrating wounds*—those produced by anything running deeply into the flesh; such as a sword, a sharp nail, a spike, the point of a bayonet, &c.

1. *Incised wounds, or cuts.*—The danger arising from these accidents is owing more to their position than to their extent. Thus, a cut of half an inch long, which goes through an artery, is more serious than a cut of two inches long, which is not near one. Again, a small cut on the head is more often followed by dangerous symptoms than a much larger one on the legs.—*Treatment.*—If the cut is not a very large one, and no artery or vein is wounded, this is very simple. If there are any foreign substances left in the wound, they must be taken out, and the bleeding must be quite stopped before the wound is strapped up. If the bleeding is not very great, it may easily be stopped by raising the cut part, and applying rags dipped in cold water to it. All clots of blood must be carefully removed; for, if they are left behind, they prevent the wound from healing. When the bleeding has been stopped, and the wound perfectly cleaned, its two edges are to brought closely together by thin strips of common adhesive plaster, which should remain on, if there is not great pain or heat about the part, for two or three days, without being removed. The cut part should be kept raised and cool. When the strips of plaster are to be taken off, they should first be well bathed with lukewarm water. This will cause them to come away easily, and without opening the lips of the wound; which accident is very likely to take place if they are pulled off without having been first moistened

with the warm water. If the wound is not healed when the strips of plaster are taken off, fresh ones must be applied. Great care is required in treating cuts of the head, as they are often followed by erysipelas taking place round them. They should be strapped with isinglass-plaster, which is much less irritating than the ordinary adhesive plaster. Only use as many strips as are actually requisite to keep the two edges of the wound together; keep the patient quite quiet, on low diet, for a week or so, according to his symptoms. Purge him well with the No. 2 pills (five grains of blue pill mixed with the same quantity of compound extract of colocynth; make into two pills, the dose for an adult). If the patient is feverish, give him two tablespoonfuls of the fever-mixture three times a day. (The fever-mixture, we remind our readers, is thus made: Mix a drachm of powdered nitre, 2 drachms of carbonate of potash, 2 teaspoonfuls of antimonial wine, and a tablespoonful of sweet spirits of nitre in half a pint of water.) A person should be very careful of himself for a month or two after having had a bad cut on the head. His bowels should be kept constantly open, and all excitement and excess avoided. When a vein or artery is wounded, the danger is, of course, much greater. These accidents, therefore, should always be attended to by a surgeon, if he can possibly be procured. Before he arrives, however, or in case his assistance cannot be obtained at all, the following treatment should be adopted:—Raise the cut part, and press rags dipped in cold water firmly against it. This will often be sufficient to stop the bleeding, if the divided artery or vein is not dangerous. When an artery is divided, the blood is of a bright red colour, and comes away in jets. In this case, and supposing the leg or arm to be the cut part, a handkerchief is to be tied tightly round the limb *above* the cut; and, if possible, the two bleeding ends of the artery should each be tied with a piece of silk. If the bleeding is from a vein, the blood is much darker, and does not come away in jets. In this case, the handkerchief is to be tied *below* the cut, and a pad of lint or linen pressed firmly against the divided ends of the vein. Let every bad cut, especially where there is much bleeding, and even although it may to all appearance have been stopped, be attended to by a surgeon, if one can by any means be obtained.

Class 2. *Lacerated or torn wounds.*—There is not so much bleeding in these cases as in clean cuts, because the blood-vessels are torn across in a zigzag manner, and not divided straight across. In other respects, however, they are more serious than ordinary cuts, being often followed by inflammation, mortification, fever, and in some cases by lock-jaw. Foreign substances are also more likely to remain in them. *Treatment.*—Stop the bleeding, if there is any, in the manner directed for cuts; remove all substances that may be in the wound; keep the patient quite quiet, and on low diet—gruel, arrowroot, and the like; purge with the No. 1 pills and the No. 1 mixture. The No. 1 pill: Mix five grains of calomel and the same quantity of antimonial powder, with a little bread-crumb, and make into two pills, which is the dose for an adult. The No. 1 mixture: Dissolve an ounce of Epsom salts in half a pint of senna tea. (A quarter of the mixture is a dose.) If there are feverish symptoms, give two tablespoonfuls of fever-mixture (see above) every four hours. If possible, bring the two edges of the wound together, *but do not strain the parts to do this.* If they cannot be brought together, on account of a piece of flesh being taken clean out, or the raggedness of their edges, put lint dipped in cold water over the wound, and cover it with oiled silk. It will then fill up from the bottom. If the wound, after being well washed, should still contain any sand, or grit of any kind, or if it should get red and hot from inflammation, a large warm bread-poultice will be the best thing to apply until it becomes quite clean, or the inflammation goes down. When the wound is a very large one, the application of

warm poppy fomentations is better than that of the lint dipped in cold water. If the redness and pain about the part, and the general feverish symptoms are great, from eight to twelve leeches are to be applied round the wound, and a warm poppy fomentation or warm bread-poultice applied after they drop off.

Class 3. *Punctured or penetrating wounds.* — These, for many reasons, are the most serious of all kinds of wounds. *Treatment.*—The same as that for lacerated wounds. Pus (matter) often forms at the bottom of these wounds, which should, therefore, be kept open at the top, by separating their edges, every morning, with a bodkin, and applying a warm bread-poultice immediately afterwards. They will then, in all probability, heal up from the bottom, and any matter which may form will find its own way out into the poultice Sometimes, however, in spite of all precautions, collections of matter (abscesses) will form at the bottom or sides of the wound. These are to be opened with a lancet, and the matter thus let out. When matter is forming, the patient has cold shiverings, throbbing pain in the part, and flushes on the face, which come and go. A swelling of the part is also often seen. The matter in the abscesses may be felt to move backwards and forwards, when pressure is made from one side of the swelling to the other with the first and second fingers (the middle and that next the thumb) of each hand.

MEDICAL MEMORANDA.

Advantages of Cleanliness.—Health and strength cannot be long continued unless the skin—*all* the skin—is washed frequently with a sponge or other means. Every morning is best; after which the skin should be rubbed very well with a rough cloth. This is the most certain way of preventing cold, and a little substitute for exercise, as it brings blood to the surface, and causes it to circulate well through the fine capillary vessels. Labour produces this circulation naturally. The insensible perspiration cannot escape well if the skin is not clean, as the pores get choked up. It is said that in health about half the aliment we take passes through the skin.

The Tomato Medicinal.—To some persons there is something unpleasant, not to say offensive, in the flavour of this excellent fruit. It has, however, long been used for culinary purposes in various countries. Dr. Bennett, a professor of some celebrity, considers it an invaluable article of diet, and ascribes to it very important medicinal properties. He declares:—1. That the tomato is one of the most powerful deobstruents of the *materia medica;* and that, in all those affections of the liver and other organs where calomel is indicated, it is probably the most effective and least harmful remedial agent known in the profession. 2. That a chemical extract can be obtained from it, which will altogether supersede the use of calomel in the cure of diseases. 3. That he has successfully treated diarrhœa with this article alone. 4. That when used as an article of diet, it is almost a sovereign remedy for dyspepsia and indigestion.

Warm Water.—Warm water is preferable to cold water as a drink to persons who are subject to dyspeptic and bilious complaints, and it may be taken more freely than cold water, and consequently answers better as a diluent for carrying off bile, and removing obstructions in the urinary secretion, in cases of stone and gravel. When water of a temperature equal to that of the human body is used for drink, it proves considerably stimulant, and is particularly suited to dyspeptic, bilious, and gouty subjects.

Cautions in Visiting Sick-Rooms.—Never venture into a sick-

room if you are in a violent perspiration (if circumstances require your continuance there), for the moment your body becomes cold, it is in a state likely to absorb the infection, and give you the disease. Nor visit a sick person (especially if the complaint be of a contagious nature) with *an empty stomach;* as this disposes the system more readily to receive the contagion. In attending a sick person, place yourself where the air passes from the door or window to the bed of the diseased, not betwixt the diseased person and any fire that is in the room, as the heat of the fire will draw the infectious vapour in that direction, and you would run much danger from breathing it.

Necessity of Good Ventilation in Rooms lighted with Gas.—In dwelling-houses lighted by gas, the frequent renewal of the air is of great importance. A single gas-burner will consume more oxygen, and produce more carbonic acid to deteriorate the atmosphere of a room, than six or eight candles. If, therefore, when several burners are used, no provision is made for the escape of the corrupted air and for the introduction of pure air from without, the health will necessarily suffer.

Hints to Bathers.—Avoid bathing within two hours after a meal, or when exhausted by fatigue or from any other cause; or when the body is cooling after perspiration; or altogether in the open air if, after having been a short time in the water, there is a sense of chilliness with numbness of the hands and feet; but bathe when the body is warm, provided no time is lost in getting into the water. Avoid chilling the body by sitting or standing undressed on the banks or in boats after having been in the water. Avoid remaining too long in the water; leave the water immediately there is the slightest feeling of chilliness. The vigorous and strong may bathe early in the morning on an empty stomach. The young, and those who are weak, had better bathe two or three hours after a meal; the best time for such is from two to three hours after breakfast. Those who are subject to attacks of giddiness or faintness, and those who suffer from palpitation and other sense of discomfort at the heart, should not bathe without first consulting their medical adviser.

Mad Dogs.—We call attention to the measures recommended by the Council of Hygiene of Bordeaux, France, for protecting the people against the dangers of hydrophobia. It is well known that the madness of dogs has periods which one can call premonitory and harmless. If these periods were generally known, the dogs could be put beyond the power of hurting before they become a public danger. On this subject the Council of Hygiene has issued the following instructions:—"A short time, some two days, after the madness has seized the dog, it creates disturbances in the usual condition of the animal which it is indispensable to know. 1. There is agitation and restlessness; the dog turns himself continually in his kennel. If he be at liberty, he goes and comes and seems to be seeking something; then he remains motionless, as if waiting; he starts, bites the air, seems as if he would catch a fly, and dashes himself, barking and howling, against the wall. The voice of his master dissipates these hallucinations; the dog obeys, but slowly, with hesitation, as if with regret. 2. He does not try to bite; he is gentle, even affectionate, and he eats and drinks: but he gnaws his litter, the ends of the curtains, the padding of cushions, the coverlids of beds, the carpets, &c. 3. By the movement of his paws about the sides of his open mouth, one might think he was wishing to free his throat of a bone. 4. His voice has undergone such a change that it is impossible not to be struck by it. 5. The dog begins to fight with other dogs; this is decidedly a characteristic sign, if the dog be generally of a peaceful nature. The numbers 3, 4, and 5, indicate an already very advanced period of the disease, and the time is at hand when man will be exposed to the dangerous fits of the animal if immediate measures be not taken. These measures are, to chain him up as

dangerous, or, better still, to destroy him." After having accepted this advice, the council has desired that it should be inserted at least once a year in a public paper. It has also desired, and which seems to us more particularly efficacious and practical, that it should be printed on the back of the notice for the dog-tax, on the back of the receipt for this tax, and finally on the back of the permissions for hunting. These excellent measures ought to become general.

Rules for the Preservation of Health.

PURE ATMOSPHERIC AIR is composed of nitrogen, oxygen, and a *very* small proportion of carbonic acid gas. Air once breathed has lost the chief part of its oxygen, and acquired a proportionate increase of carbonic acid gas. *Therefore*, health requires that we breathe the same air once only.

THE SOLID PART OF OUR BODIES is continually wasting and requires to be repaired by fresh substances. *Therefore*, food, which is to repair the loss, should be taken, with due regard to the exercise and waste of the body.

THE FLUID PART OF OUR BODIES also wastes constantly; there is but one fluid in animals, which is water. *Therefore*, water only is necessary, and no artifice can produce a better drink.

THE FLUID OF OUR BODIES is to the solid in proportion as nine to one. *Therefore*, a like proportion should prevail in the total amount of food taken.

LIGHT EXERCISES AN IMPORTANT INFLUENCE upon the growth and vigour of animals and plants. *Therefore*, our dwellings should freely admit the sun's rays.

DECOMPOSING ANIMAL AND VEGETABLE SUBSTANCES yield various noxious gases, which enter the lungs and corrupt the blood. *Therefore*, all impurities should be kept away from our abodes, and every precaution be observed to secure a pure atmosphere.

WARMTH IS ESSENTIAL to all the bodily functions. *Therefore*, an equal bodily temperature should be maintained by exercise, by clothing, or by fire.

EXERCISE WARMS, INVIGORATES, and purifies the body; clothing preserves the warmth the body generates; fire imparts warmth externally. *Therefore*, to obtain and preserve warmth, exercise and clothing are preferable to fire.

FIRE CONSUMES THE OXYGEN of the air, and produces noxious gases. *Therefore*, the air is less pure in the presence of candles, gas, or coal fire, than otherwise, and the deterioration should be repaired by increased ventilation.

THE SKIN IS A HIGHLY-ORGANIZED MEMBRANE, full of minute pores, cells, blood-vessels, and nerves; it imbibes moisture or throws it off, according to the state of the atmosphere and the temperature of the body. It also "breathes," like the lungs, (though less actively). All the internal organs sympathise with the skin. *Therefore*, it should be repeatedly cleansed.

LATE HOURS AND ANXIOUS PURSUITS exhaust the nervous system, and produce disease and premature death. *Therefore*, the hours of labour and study should be short.

MENTAL AND BODILY EXERCISE are equally essential to the general health and happiness. *Therefore*, labour and study should succeed each other.

MAN WILL LIVE MOST HEALTHILY upon simple solids and fluids, of which a sufficient but temperate quantity should be taken. *Therefore*, over-indulgence in strong drinks, tobacco, snuff, opium, and all mere indulgences, should be avoided.

SUDDEN ALTERNATIONS OF HEAT AND COLD are dangerous (especially to the young and the aged). *Therefore*, clothing, in quantity and quality, should be adapted to the alternations of night and day, and of the seasons. *And therefore, also*, drinking cold water when the body is hot, and hot tea and soups when cold, are productive of many evils.

VII. CLOTHING.

What should be Worn next the Skin?—The primary consideration in dress is—what should be worn next to the skin? We answer — wool, decidedly, and for the following reasons: —Linen, by all its compactness retains the perspired matter, so that shirts worn for some days will exhale a sensation of coolness, indicating an obstructed circulation. Silk attracts less humidity than linen, and is, therefore, still more objectionable. Wool, by the gentle friction and moderate heat which it excites, promotes perspiration, and absorbs the matter thrown out from the skin, without clogging the pores. Cotton increases warmth and perspiration; but having the property of retaining the discharged humours, is too apt to throw the same back again into the system, and thereby hurting the animal fluids. It is, however, during active exercise that the different effects of the substances are more plainly seen. When the body is covered with woollen, though perspiration is increased, the matter thrown out passes through the flannel into the air, leaving the skin dry and warm. If, under the same circumstances, linen is warm, the perspiration instead of being dispersed, remains, and causes a disagreeable sensation. Flannel has also this advantage: those who perspire profusely will not easily catch cold on going into the open air. This is not the case with linen shirts, which will produce chilliness, followed by fever. Flannel when first used is apt to irritate the skin, and so cause an uneasy feeling; this soon goes off, and it becomes at length comfortable and even pleasant. Flannel is suitable to all seasons. Worsted socks and stockings, varied in thickness, according to the season, are on all accounts the best.

In Choosing Cloth for Clothes see that the fabric is fine and the texture close and even. Pass the hand lightly in the contrary direction to the nap, and if the feel is soft and silky without harshness, you may conclude the cloth is made of fine wool. Very "satiny" cloths spot with the rain. Take up a piece of cloth in both hands, and fold a little piece between the thumb and forefinger of one hand; pull the cloth sharply with the other hand, and if the sound produced by the slipping of the fold is clear and sharp, the cloth is of good quality. Do not choose large patterns if you are short, and if you are stout do not wear checks or plaids.

Clothes for Travelling.—Every traveller should wear flannel next the skin both in hot and cold climates. Linen is very improper, for when the wearer is wet with rain or perspiration, it strikes cold to the skin; coarse calico sheets, for fine, hot, dry weather, and flannel for damp, windy, or cold, may be considered generally appropriate. A poncho is very useful, for it is a sheet as well as a cloak, being simply a blanket with a slit in the middle to admit the wearer's head. Cloth is made waterproof, as directed (*see* Receipt) and also by rubbing soapsuds into the wrong side, and working well in; when dry do the same with a solution of alum. A thick tweed shooting costume is the most comfortable and best dress for all except damp or tropical climates. If you are likely to have much riding, leather or moleskin trousers are useful, or tweed trousers may be covered down the insides of the legs with leather. A blouse or jacket, cut short to clear the saddle, is capital either for walking or riding. Another "indispensable" is a thick lined dressing gown. It is equally good to wear in the evening and for sleeping in. Thick worsted socks *only* should be worn, whether the climate be hot or cold. It is im-

portant to keep the clothes as dry as possible, and if on the water a capital plan is to dip the wet clothes in the salt water, wring them out, and put them on again. This, we are told on good authority, feels like a change of dry clothes.

To Brush Clothes.—If a coat be wet let it be quite dry before brushing it. Rub out the spots of dirt with the hands, beat it lightly with a small cane. Then lay it out on a board or table, the collar to the left hand, and brush, briskly and smoothly, the right way of the cloth. Brush first the shoulders, back and sleeves, and then the skirts. Last the insides and the collar. Waistcoats and trousers are brushed straight down, taking care they are quite dry, and rubbing out spots of mud, &c., before brushing down. You should have two brushes, one hard and the other soft, the former of which should be used as little as possible, and never for "faced" cloth. Should there be spots of tallow-grease on the clothes, take it off with the nail; or, if that cannot be done, take a hot iron, cover the part where the grease is with some thick brown paper, and run the iron over the spot. This will draw the grease into the paper. Repeat this process until no more grease comes. Ordinary grease-spots or marks on the collar or lappels may generally be removed by a little soft soap, or a little ox-gall or curd soap. Fruit and wine stains may frequently be taken out by holding the part over an ordinary brimstone match, lighted; or by water with a little salts of lemon, muriatic or oxalic acid in it. These last must not, however, be applied to delicate colours. For the stains of acids wash the part with a little spirits of hartshorn or liquid ammonia. Ox-gall is one of the most valuable articles for cleansing woollen and other articles; it combines readily with all greasy substances, and assists powerfully the action of soap, which may in many cases be dispensed with. Silks and all other articles of even the most delicate colours may be cleaned with it. The chief objection to its use is its disagreeable smell; this is got rid of thus: Boil a quart of the gall, skimming it frequently, then add one ounce of powdered alum; leave on the fire until thoroughly combined. Set the mixture to cool, and pour it, when cold, into a bottle which is to be loosely corked. Proceed exactly in the same way with another quart of gall, using one ounce of common salt instead of alum. The two bottles are to be put by for three months in a room of moderate temperature; a thick sediment will be deposited, but, as a good deal of yellow colouring matter still remains, the contents of the two bottles, carefully poured off from the sediment, are to be filtered separately, and then mixed in equal parts, a portion at a time. The colouring matter will be precipitated, leaving the gall perfectly pure and colourless. It is then to be again filtered, bottled and tightly corked, and kept in a cool place for use. In this state it preserves all its detergent properties, is free from smell, and does not spoil with keeping.

Mending Clothes. — Things neatly mended last four times as long as those carelessly repaired. Too much pains cannot, therefore, be expended on the prosaic but very necessary operation of "mending clothes." A piece of each material should be reserved, in making up dresses, &c., for repairing when needed. All things should be periodically examined, and rents sewn up before they go farther. When the linen is looked out for the wash it should be examined to see if there is anything wrong, and after washing, &c., all buttons should be looked to, and made tight and secure. If chamber towels are wearing thin in the centre, cut them in halves, sew the edges together, and hem the cut—now the outside edges. Sew up torn linings, rebind frayed edges, and replace broken strings, buttons, and hooks, directly seen, or the trouble will be greatly increased. Never forget the well-known aphorism, "A stitch in time saves nine."

Altering Clothes.—In altering clothes for children from those of adults take the pattern of the best fitting things and copy exactly. Some practice.

knowledge, and physical strength are required to do this tailors' work, and therefore without these essentials it had better be left alone. The right way to proceed cannot be taught in books, and even when learned is seldom worth the trouble.

Clothes Closets, Drawers, &c. — When moths have infested these places rub them well with a strong decoction of tobacco, and sprinkle them often with spirits of camphor.

Black Clothes may be Restored if threadbare about the elbows, cuffs, knees, &c., by the following process: —The clothes must be soaked in cold water for half an hour, then taken out of the water, and put on a board, and the threadbare parts of the clothes rubbed with a teazel, or half-worn hatter's "card," filled with flocks. When this is done, hang the coat up to dry, and with a hard brush lay the nap the right way. This is said to be the method which is pursued by the dealers in old clothes, and it greatly improves the appearance of the garments.

Ladies' Dress.—The secret of dressing well, simply consists in knowing the three grand unities of dress—your own position, age, and peculiarities, and no woman can dress well who does not. Dress should be simple, elegant and becoming, without appearing so expensive as to evidently be beyond the circumstances of the wearer. Consider well before you purchase whether the new silk, bonnet, shawl, or ribbon matches your complexion, is adapted to your height and figure, and, above all, that it is graceful and pretty—not merely fashionable. You must also adapt, as much as possible, your new purchases to the things you already have, so as to show no bad contrasts. Dress with regard to your station in life, your age, and your appearance.

Childrens' Clothing should be well-cut, but sufficiently loose to allow fair play to the limbs. Nothing is so absurd, as to dress a babe or young child in tight garments; but they should be of materials suited to the season. It is not necessary to give direction for the cutting or making of children's dresses, as almost every mother or elder sister knows how to cut out and make simple frocks, jackets, &c.; and when that knowledge has not been obtained in youth, a few lessons from a practical dressmaker will suffice. Carefully avoid the absurdity of swaddling a child's body in heaps of flannel and warm stuffs, and leaving its legs and arms bare. Too many clothes, however, are as mischievous as too few. Contrast in colours is of no slight importance. Light colours and thin materials for summer; bright warm colours, and stout cloth for winter. The head should be cool, and the feet well shod. Long clothes and caps for infants are happily going out of fashion, and a more rational style of dress adopted by all sensible mothers.

Tight Lacing.—Avoid all tight bandages—as stays, garters, belts, &c. They impede the free circulation of the blood, and in thousands of cases produce disease and deformity. More harm has been done by tight-lacing, than by all the other vagaries of fashion put together.

The Covering of the Head should be very light, as well for men as for women, and if children were more often allowed to go bare-headed into the open air, the practice would much invigorate their constitutions, and render them less susceptible of cold. No one, however, should go uncovered in sunshine. Black hats, though generally worn, are not so good a defence against the power of the sun as hats or caps of any other colour.

Keep your Feet Warm.—If you do not do this, the blood accumulates towards the head, and sensation of chilliness is felt over the whole body, and the general comfort interfered with.

VIII. LAW.

Directions for Securing Copyrights.

Under the revised Act of Congress, which took effect July 8, 1870.—A printed copy of the title of the book, map, chart, dramatic or musical composition, engraving, cut, print, photograph, chromo, or design for a work of the fine arts, for which copyright is desired, must be sent by mail, addressed,

"LIBRARIAN OF CONGRESS,
"WASHINGTON, D.C.
"Copyright matter."

This must be done before publication of the book or other article.

A fee of fifty cents, for recording the title of each book or other article, must be inclosed with the title as above, and fifty cents in addition (or one dollar in all) for each certificate of copyright under seal of the Librarian of Congress, which will be transmitted by return mail.

Within ten days after publication of each book or other article, two complete copies of the best edition issued must be mailed to perfect the copyright, with the address,

"LIBRARIAN OF CONGRESS,
"WASHINGTON, D.C.
"Copyright matter."

If the above direction is complied with, both books and titles will come free of postage, and postmasters will give receipt for the same if requested. Without the deposit of copies above required, the copyright is void, and a penalty of twenty-five dollars is incurred.

Copyrights recorded at a date prior to July 8, 1870, in any district clerk's office, do not require re-entry at Washington. But one copy of each book or other article published since March 4, 1865, is required to be deposited in the Library of Congress, if not already done. Without such deposit, the copyright is void.

No copyright is valid unless notice is given by inserting in the several copies of every edition published, on the title page or the page following, if it be a book; or if a map, chart, musical composition, print, cut, engraving, photograph, painting, drawing, chromo, statue, statuary, or model or design intended to be perfected and completed as a work of the fine arts, by inscribing upon some portion of the face or front thereof, or on the face of the substance on which the same is mounted, the following words, viz.: "Entered according to Act of Congress, in the year ——, by ——, in the office of the Librarian of Congress, at Washington."

The law imposes a penalty of one hundred dollars upon any person who has not obtained copyright, who shall insert the notice "*entered according to Act of Congress*," etc., or words of the same import, in or upon any book or other article.

Any author may reserve the right to translate or to dramatize his own work. In this case, notice should be given by printing the words, *Right of translation reserved*, or *All rights reserved*, below the notice of copyright entry, and notifying the Librarian of Congress of such reservation, to be entered upon the record.

Each copyright secures the exclusive right of publishing the book or article copyrighted for the term of twenty-eight years. At the end of that time, the author or designer may secure a renewal for the further term of fourteen years, making forty-two years in all. Applications for renewal must be accompanied by explicit statement of ownership, in the case of the author, or of relationship, in the case of his heirs, and must state definitely the date and place of entry of the original copyright.

The time within which any work

copyrighted may be issued from the press is not limited by any law or regulation, but depends upon the discretion of the proprietor. A copyright may be secured for a projected work, as well as for a completed one.

Any copyright is assignable in law by any instrument of writing; but such assignment must be recorded in the office of the Librarian of Congress within sixty days from its date. The fee for this record is fifteen cents for every one hundred words, and ten cents for every one hundred words for a copy of the record of assignment.

In the case of books published in more than one volume, if issued or sold separately, or of periodicals published in numbers, or of engravings, photographs, or other articles published with variations, a copyright is to be taken out for each volume of a book, or number of a periodical, or variety, as to size or inscription, of any other article.

To secure a copyright for a painting, statue, or model or design intended to be perfected as a work of the fine arts, so as to prevent infringement by copying, engraving, or vending such design, a definite description must accompany the application for copyright, and a photograph of the same, at least as large as "cabinet size," should be mailed to the Librarian of Congress within ten days from the completion of the work.

Every applicant for a copyright must state distinctly in whose name the copyright is to be entered, and whether the right is claimed as author, designer, or proprietor. No affidavit or formal application is required.

The British Law of Copyright.

The following principal points in which the *Law of Copyright in England* differs from that in our own country may interest some.

In Great Britain the copyright in every book which is published *in the lifetime of its author* endures for the natural life of such author, and for the further term of seven years commencing at the time of his death, and shall be the property of such author and his assignees; provided always, that if the said term of seven years shall expire before the end of forty-two years from the first publication of such book, the copyright shall in that case endure for such period of forty-two years. The copyright in every book published *after the death of its author* endures for the term of forty-two years from the first publication thereof, and is the property of the proprietor of the author's manuscript from which the book is first published, and his assignees.

A complete copy from each addition of every book published must be deposited at the British Museum, bound in the best manner in which the book is issued, within one month from the date of publication. If demanded in writing, a copy also must be furnished each of the following libraries: the *Bodleian* Library at Oxford, the Public Library at Cambridge, the Library of the Faculty of Advocates at Edinburgh, and the Library of the College of the Holy and Undivided Trinity of Queen Elizabeth, near Dublin.

The only country in the world in which a copyright is perpetual, is *Denmark*.

Directions for securing Trade Marks.

Legal protection may be had by any firm, corporation, or individual, in the exclusive use of a trade-mark, on compliance with the following laws of the Patent Office:—

1. By causing to be recorded in the Patent Office the names of the parties and their residences and place of business, who desire the protection of the trade-mark.

2. The class of merchandise and the particular description of goods comprised in such class, by which the trade-mark has been or is intended to be appropriated.

3. A description of the trade-mark itself, with fac-similes thereof, and the mode in which it has been or is intended to be applied or used.

4. The length of time, if any, during which the trade-mark has been used.

5. The payment of a fee of twenty-five dollars, in the same manner and for the same purpose as the fee required for patents.

6. The compliance with such regulations as may be prescribed by the Commissioner of Patents.

7. The filing of a declaration, under the oath of the person, or of some member of the firm, or officer of the corporation, to the effect that the party claiming protection for the trade-mark has a right to the use of the same, and that no other person, firm, or corporation has the right to such use, either in the identical form, or having such near resemblance thereto as might be calculated to deceive, and that the description and fac-similes presented for record are true copies of the trade-mark sought to be protected.

A trade-mark remains in force for thirty years. At the end of that time a renewal may be secured for thirty years more in the case of articles manufactured in this country. A trade-mark is assignable in law by any instrument of writing; but the assignment must be recorded in the Patent Office within sixty days after its execution.

No trade-mark is lawful which is only the name of a firm, corporation, or person, unaccompanied by a mark sufficient to distinguish it from the same name when used by other persons, or which is identical with a trade-mark appropriate to the same class of merchandise, and belonging to a different owner, and already registered, or received for registration, or which so nearly resembles such last-mentioned trade-mark as to be likely to deceive the public.

Directions for securing Patents.

A patent may be secured by any person, whether a citizen of the United States or an alien, who is the original and first inventor or discoverer of any new and useful art, machine, manufacture, or composition of matter, or any new and useful improvement, provided the invention, discovery, or improvement has not been in public use or sale for more than two years prior to the application for a patent.

Before completing his invention, the inventor (if a citizen of the United States, or an alien who has resided here one year and has declared his intention to become a citizen), in order to secure himself, may file a *caveat* (fee, ten dollars), which is a description of the, as yet, immatured invention or discovery. This caveat entitles him one year to an official notice of any other application for a patent of a similar or interfering nature, filed during that time. Within three months from the date of such notice, he will be required to complete his own application. A renewal of the caveat (fee, ten dollars) may be secured on petition for another year.

Actual joint inventors must obtain a joint patent, for neither can claim one separately. The furnishing of capital by a man to an inventor does not enable them to secure a joint patent; nor can independent inventors of separate improvements in the same machine take out a joint patent for their separate inventions.

Every patented article must be stamped with the word "Patented," together with the day and year the patent was granted. When, from the character of the article this cannot be done, a label, containing the like notice, must be affixed to each package wherein one or more is enclosed.

Every assignment of a patent, or part thereof, must be recorded in the Patent Office within three months from the date thereof, otherwise it is void.

How to apply for a Patent.

The first thing is to send a *petition* in writing to the Commissioner of Patents, and file in the Patent Office a *specification;* that is to say, a written description of it, and of the manner and process of making, constructing, compounding, and using it, in such clear terms as to enable any person skilled in the art or science to which

it appertains, or with which it is most nearly connected, to make, and use it; and in case of a machine, he must explain its principle, and the best mode in which he has contemplated applying that principle so as to distinguish it from other inventions; and he must particularly point out, and distinctly claim the part, improvement, or combination which he claims as his invention or discovery; and the specification and claim must be signed by the inventor and attested by two witnesses.

The applicant must make at the same time *oath of invention*, or affirmation that he believes himself to be the original and first inventor or discoverer of the improvement for which he solicits a patent; that he does not know, and does not believe that it was ever before known or used; and must state of what country he is a citizen. This oath or affirmation may be made before any person in the United States authorized by law to administer oaths; or, when the applicant resides in a foreign country, before any minister, chargé d'affaires, consul, or commercial agent, holding commission under the government of the United States, or before any notary public of the foreign country in which the applicant may be.

Below are the forms to be used in making the petition, the specification, and the oath of invention:—

Form of Petition.—To the Hon. Commissioner of Patents, Washington, D.C. Your petitioner prays that letters patent may be granted to him for the invention set forth in the annexed specification.—John Edwards. (*See, of course, that the letter is dated, the full address given, and the name signed distinctly.*)

Form of Specification.—To all whom it may concern:—Be it known that I, John Edwards, of the city of ———, county of ———, State of ———, have invented a new and improved—(*Here specify the invention with great care, so as to set forth its exact object.*)

I claim as a new invention my —— as above set forth. JOHN EDWARDS.

Witnesses, (two).

Form of Oath of Invention (to follow the specification):

State of ———, County of ———, John Edwards, the above-named petitioner, being duly sworn, deposes and says that he verily believes himself to be the original and first inventor of (*Here name the invention*) described in the foregoing specification; that he does not know, and does not believe that the same was ever before known or used; and that he is a citizen of the United States [*or*, a citizen of ———, resident in the United States. &c.] JOHN EDWARDS.

Sworn and subscribed before me, this first day of August, 1872.

JAMES WILLIAMS,
Justice of the Peace.

In addition to the above forms, *drawings*, *compositions*, or *models*, may be required.

Drawings must be furnished whenever the case admits of them. The applicant must furnish one copy signed by the inventor or his attorney in fact, and attested by two witnesses, which will be filed in the Patent Office; and a copy of these drawings must be attached to the patent as a part of the specification. They must be on thick, smooth drawing-paper, sufficiently stiff to support itself in the portfolios of the office. They must be neatly and artistically executed, with such detached sectional views as to clearly show what the invention is in construction and operation. Each part must be distinguished by the same number or letter whenever it appears in the several drawings. The name of the invention should be written at the top, the shortest side being considered as such. These drawings must be signed by the applicant or his attorney, and attested by two witnesses, and must be sent with the specification The sheets must not be larger than ten inches by fifteen, that being the size of the patent.

Compositions.—When the invention or discovery is of a composition, the applicant, if required by the Commissioner, must furnish specimens of ingredients and of the composition,

sufficient in quantity for the purpose of experiment.

Models.—In all cases which admit of representation by model, the applicant, if required by the Commissioner, must furnish one of convenient size to exhibit advantageously the several parts of his invention or discovery.

Such model must clearly exhibit every feature of the machine which forms the subject of a claim of invention.

The model must be neatly and substantially made, of durable material. It should be made as small as possible, but not in any case more than one foot in length, width, or height. If made of pine, or other soft wood, it should be painted, stained, or varnished. Glue must not be used, but the parts should be so connected as to resist the action of heat or moisture.

A working model is always desirable, in order to enable the office fully and readily to understand the precise operation of the machine. The name of the inventor, and of the assignee (if assigned), and also the title of the invention, must be affixed upon it in a permanent manner.

The above papers, &c., should be forwarded, prepaid, by express, "To the Hon. Commissioner of Patents, Washington, D.C."

On the filing of any application and the payment of the duty required by law, the Commissioner causes an examination to be made of the alleged new invention or discovery; and if on such examination it appears that the claimant is justly entitled to a patent under the law, and that it is sufficiently useful and important, the Commissioner issues a patent for it.

All applications must be completed within two years after the filing the petition.

Design Patents.—A patent for a design may be granted to any person, whether citizen or alien, who, by his own industry, genius, efforts, and expense, has invented or produced any new and original design for a manufacture, bust, statue, alto-relievo, or bas-relief, &c., &c.

Patents for designs are granted for 3½ years, for 7 years, or for 14 years, as the applicant may elect in his application.

Patent Office Fees.

The following fees are official by Act of Congress:—

On filing every application for a design, for three years and six months	$10 00
On filing every application for a design, for seven years ...	15 00
On filing every application for a design, for fourteen years	30 00
On filing every caveat	10 00
On filing every application for a patent	15 00
On issuing each original patent	20 00
On filing a disclaimer	10 00
On filing every application for a re-issue	30 00
On filing every application for a division of a re-issue ...	30 00
On filing every application for an extension	50 00
On the grant of every extension	50 00
On filing the first appeal from a primary examiner to examiners-in-chief	10 00
On filing an appeal to the Commissioner from examiners-in-chief	20 00
On depositing a trade-mark for registration	25 00
For every copy of a patent or other instrument, for every 100 words	10
For recording every assignment of 300 words or under ...	1 00
For recording every assignment, if over 300 and not over 1000 words	2 00
For recording every assignment, if over 1000 words ...	3 00

The Cost of obtaining Patents in Foreign Countries.

In all foreign countries a complete specification must be deposited on application for the patent, and in most

cases an annual tax is payable, varying in amount in each country.

France.—The tax in this country is 100f., or, including agency fees, $25 per annum, payable in advance, which may be discontinued at any time by the patentee abandoning his right. The average of the first cost, including the first year's tax, home and foreign agency fees, translation of the specification, copies of same, drawings, &c., is about $75. The invention must be put into practical operation in France within two years from the delivery of the patent, or the right will be lost.

Great Britain.—Protection may be secured in one patent for Great Britain and Ireland, the Channel Islands, and the Isle of Man, for fourteen years, on condition that the patent be completed within six months from the date of application.

The stamp duties and fees for obtaining letters patent for inventions in Great Britain are to be paid as follows :—

On application for provisional protection, which secures the right to the invention for six months - -	£10 ($50)
For notice to proceed, which must be given, at the latest, two months before the provisional protection expires	£6 ($30)
Moving for the warrant and great seal, which must be done, at the latest, twelve clear days before the protection expires - -	£14 ($70)

The cost of the specification, which must be on a £5 stamp, will vary according to the extent and work in the drawings.

If the grant be opposed (which is now of very rare occurrence), additional expenses will be incurred, varying in amount from $25 to $100.

At the expiration of the third year from the date of the patent, a stamp duty of $250, and at the end of the seventh year $500 must be paid, or the right will cease.

Belgium.—The average cost on application, including agency, first year's tax, and all fees, is about $60. The invention must be put into practical operation within one year after it has been put in operation in a foreign country. The tax for the second year amounts to $10, and increases $2½ annually.

Holland.—The average cost on application, including agency fees, &c., is from $50 to $60. The full tax varies according to the subject and the estimated value of the invention, at the discretion of the Government ; the average being from $150 to $300 for the whole term, payable in from one to two years from the date, when the invention must be put into operation.

Austria.—Patents in this country are granted for any term from one to fifteen years, at the discretion of the applicant, and the taxes must be paid for the whole number of years applied for ; but before the expiration of this term he may have it extended to any additional number of years, not exceeding fifteen in the whole. The usual plan is to ask for three years, and at the expiration of that term to renew it for three or more years, at the discretion of the applicant. The cost for the three years will be about $150. The invention must be put into operation within one year, and must not be discontinued for any two consecutive years.

There being conditions attached to the grant of all foreign patents, differing in each country, it is impossible to give all the details here. The following list will be about the average cost for each country on application :—

Russia, for five years - -	$400
Do. ten do. - -	600
Prussia - - - - -	100
German (or Italian) States—each	100
Sweden or Denmark - -	125
Spain, five years - - -	200
Do. ten do. - - -	375
Portugal - - - - -	150
Sardinia - - - - -	150
Saxony - - - - -	100
Hanover - - - - -	100
Baden - - - - -	100
Bavaria - - - - -	100
Denmark - - - - -	125

Some of these countries require notarial and consular powers to accom-

pany the applications, which are extra charges of from $5 to $15.

There are patent agents in all our large cities, who will secure for the inventor, through foreign correspondents, a patent in any of the countries of Europe. The cost will be about as given above.

Legal Rates of Interest in the Different States.

All New England States, 6 per cent.

In Massachusetts a higher rate is allowable on special contracts; but no such special contracts are valid in any of the other New England States.

In New York and New Jersey, 7 per cent.

In Pennsylvania, Delaware, Maryland, Virginia, and North Carolina, 6 per cent.

In South Carolina and Georgia, 7 per cent.

In Florida, 6 per cent.

Eight per cent. in this State is, however, allowed by special contract.

In Alabama, 8 per cent.

In Mississippi, 6 per cent.

In Louisiana, 5 per cent.

Eight per cent. allowed by special contract.

Texas, 8 per cent.

Twelve per cent. allowed by special contract.

In Ohio, Indiana, and Illinois, 6 per cent.

In Illinois 10 per cent. allowed by special contract.

In Michigan, Wisconsin, and Minnesota, 7 per cent.

Ten per cent. allowed by special contract in Michigan, and 12 per cent. in Minnesota.

In Iowa, Missouri, Kentucky, Tennessee, and Arkansas, 6 per cent.

Ten per cent. allowed in Iowa, Missouri, and Arkansas by special contract.

In California, 10 per cent. Any rate agreed upon is legal.

In Canada, 6 per cent. Any rate agreed upon is legal.

Wills.—*A Will* is a disposition of property, which is made by a person to take effect after his decease. Every person capable of binding himself by a contract is capable of making a will.

No Will is Valid (unless it be a verbal one) which is not signed at the foot by the testator (or by some other person in his presence, and by his direction) and signed by three witnesses in the testator's presence, and in presence of each other; and such witnesses must have all seen the testator sign his name.

No Seal is Necessary to a will.

No Figures to Represent Words or Dates, or Moneys are allowed, and no abbreviations of any kind are proper, but they will not *necessarily* invalidate the will.

A Will is Revoked by the subsequent marriage of the testator; by the birth of a child; by any subsequent will; by any writing proved to have been written by the testator revoking or declaring any intention to revoke; by burning, or by tearing off the signature either by the testator or by some other person in his presence, and by his request or order; by any codicil to the will revoking any part of it (a codicil is considered an amendment to the will, and revokes, or confirms parts or all of it).

Form of a Will.—The following is the simplest form of Will, being devised to one person:—

This is the last will and testament of me, Richard Brown, of ———, in the County of ———, and State of ———, farmer. I give, devise, and bequeath all the real and personal estate of which I shall be possessed or entitled at the time of my decease unto my wife, Mary Brown (*or son, or daughter, or other person as the case may be*) absolutely, and I appoint my said wife (*or as the case may be*) sole executrix of this my will, and revoke all previous wills by me at any time heretofore made. In witness whereof I hereunto set my hand this Second Day of December, in the year of our Lord One thousand eight hundred and seventy-one.

RICHARD BROWN.

Signed by the said Richard Brown, the testator, in our presence, and who in our presence, and in the presence of each other at the same time subscribe our names as witnesses. — Thomas Jones, of ——, in the County of—— and State of ——, Farrier. Wm. Smith, of —— in the County of—— and State of ——, Tailor. Jane Simpson, of ——, &c.

Wills may also be prepared in such form as follows :—

In the name of God. Amen. I, Richard Brown, of —— Street, in the City of ——, County of ——, and State of ——, cabinet-maker and upholsterer, being in good health of body, and of sound and disposing mind and memory, do make and declare this to be my last will and testament, in manner following, that is to say : I order that all my just debts, funeral expenses, and charges of proving this my will, be, in the first place, fully paid and satisfied; and after payment thereof, and of every part thereof, I give and bequeath to Mary Jones, of ——, in the county of ——, the sum of five hundred dollars, of lawful money of the United States of America ; I give and bequeath unto John Robinson, of ——, in the county of ——, and State of ——, the sum of two hundred and fifty dollars of lawful money of the United States of America, the same to be paid him on his attaining his age of twenty-one years ; I give and bequeath unto Harriet Robinson, of ——, in the county of ——, the sum of two hundred and fifty dollars, of lawful money of the United States of America, to be paid to her at the age of twenty-one years, or on the day of marriage, whichever shall first happen. And all the rest, residue, and remainder of my goods, chattels, debts, ready-money, effects, and other assets of my estate whatsoever and wheresoever, both real and personal, I give and bequeath the same, and every part and parcel thereof, unto my beloved wife, Mary Brown, her executors, administrators, and assigns : And I do hereby nominate, constitute, and appoint Henry Jones, of ——, and William Smith, of ——, executors of this my will, hereby revoking and making void all former and other wills, by me at any time heretofore made, and declare this only to be my last will and testament. In witness whereof, I, the said testator, Richard Brown, have to this my last will and testament, set my hand, the Second day of December, in the year of our Lord One thousand eight hundred and seventy-one.

Richard Brown.

Signed by the said testator, in the presence of us, who in his presence, and at his request, and in the presence of each other, have subscribed our names as witnesses thereto. — John Thompson of ——, servant. Mary Thompson of ——, servant. James Smith.

It is advisable to make a will in duplicate, and intrust one copy to the keeping of the executor, or some other person in whom confidence is placed, as it not unfrequently happens that a will is suppressed or destroyed, or not forthcoming when it is most required.

A Codicil (that is to say an alteration or addition to a will) may be written as follows :

"Whereas by my last will and testament, dated the Second day of December, in the year of our Lord One thousand eight hundred and seventy-one, I gave to Mary Jones (here mention the legacy), I do hereby, by this present writing, which I declare to be a codicil to my said will, revoke the said legacy and give and bequeath the same to Philip Henry, of ——, merchant." To be signed, sealed, published, and declared by Richard Brown, as a codicil to his last will and testament, and witnessed as in the will.

A Verbal Will (which should always be avoided when practicable) should be of the following form, and signed by three witnesses :

A. B., his will by word of mouth, made and delivered by him on the——

day of—— 18—, in the presence of us who have hereunto subscribed our names as witnesses hereto. My will is that, &c., (here give his exact words), signed, A. B. This should be sworn to before a Justice of the Peace within ten days.

LEGAL MEMORANDA.

Humorists tell us there is no act of our lives which can be performed without breaking through some one of the many meshes of the law by which our rights are so carefully guarded; and those learned in the law, when they do give advice without the usual fee, and in the confidence of friendship, generally say, "Pay, pay anything rather than go to law;" while those having experience in the courts of Themis have a wholesome dread of their pitfalls. There are a few exceptions, however, to this fear of the law's uncertainties; and we hear of those to whom a lawsuit is an agreeable relaxation; a gentle excitement. One of this class, when remonstrated with, retorted that while one friend kept dogs, and another horses, he, as he had a right to do, kept a lawyer; and no one had a right to dispute his taste. We cannot pretend, in these few pages, to lay down even the principles of law, not to speak of its contrary exposition in different courts; but there are a few acts of legal import which all men—and women too—must perform; and to these acts we may be useful in giving a right direction. There is a house to be leased or purchased, a will to be made, or property settled, in all families; and much of the welfare of its members depends on these things being done in proper legal form. Hence the importance of this section on Popular Law in our "Household Cyclopædia."

Purchasing a House.

Few men will venture to purchase a property by private contract, without making themselves acquainted with the locality, and employing an attorney to examine the title; but many do walk into an auction-room, and bid for a property upon the representations of the auctioneer. Few persons trouble themselves about the conditions of sale, which are frequently drawn up with much caution in favour of the vendor, and in many cases with an evident intention to relieve him of his proper burthen of the expenses of making out his own title. The conditions, whatever they are, will bind the purchaser. The contract is not complete till the agreement is signed. In any such transaction you can only look at the written or printed particulars; any verbal statement of the auctioneer made at the time of the sale cannot contradict them, and they are supplemented by the agreement which the auctioneer calls on the purchaser to sign after the sale. You should sign no such contract without having a duplicate of it signed by the auctioneer, and delivered to you. It is, perhaps, unnecessary to add, that no trustee or assignee can purchase property for himself included in the trust, even at auction; nor is it safe to pay the purchase-money to an agent of the vendor, unless he give a written authority to the agent to receive it, besides handing over the requisite deeds and receipts.

Circumstances strong enough to vitiate a purchase, which has been reduced to a written contract, are first proof of fraudulent representation as to an encumbrance of which the buyer was ignorant, or a defect in title; secondly, a mistake of importance in description will vitiate a contract; but every circumstance which the purchaser might have learned by careful investigation, the law presumes he did know.

Interest on a purchase is due from the day fixed upon for completing;

where it cannot be completed, the loss rests with the party with whom the delay rests; but it appears, when the delay rests with the seller, and the money is lying idle, notice of that is to be given to the seller to make him liable to the loss of interest. If the purchaser make any profit whatever from his unpaid purchase-money, he cannot claim exemption from the payment of interest, although the delay in completing may be through the default of the vendor. In law the property belongs to the purchaser from the date of the contract; he is entitled to any benefit, and must bear any loss; the seller may suffer the insurance to drop without giving notice; and should a fire take place, the loss falls on the buyer. In agreeing to buy a house, therefore, provide at the same time for its insurance. Common fixtures pass with the house where nothing is said about them.

There are some well-recognised laws, of what may be called good neighbourhoods, which affect all properties. If you purchase a field or house, the seller retaining another field between yours and the highway, he must of necessity grant you a right of way. Where the owner of more than one house sells one of them, the purchaser is entitled to benefit by all drains leading from his house into other drains, and will be subject to all necessary drains for the adjoining houses, although there is no express reservation as to drains. Thus, if his happens to be a leading drain, other necessary drains may be opened into it. In purchasing land for building on, you should expressly reserve a right to make an opening into any sewer or watercourse on the vendor's land for drainage purposes.

Constructions.—Among the cautions which purchasers of houses, or land, should keep in view, is a not inconsiderable array of *constructive* notices, which are equally binding with actual ones. Notice to your attorney or agent is notice to you; and when the same solicitor is employed by both parties, and he is aware of an encumbrance of which you are ignorant, you are bound by it; even where the vendor is guilty of a fraud to which your agent is privy, you are responsible, and cannot be released from the consequences, although you would be able to substantiate a claim against him in either of the cases mentioned.

The Relations of Landlord and Tenant.

These are most important to both parties, and each should clearly understand his position. The proprietor of a house, or house and land, agrees to let it either to a tenant-at-will, on a yearly tenancy, or by lease. A tenancy-at-will may be created by parol or by agreement; and as the tenant may be turned out when his landlord pleases, so he may leave when he himself thinks proper; but this kind of tenancy is extremely inconvenient to both parties, and is seldom created. Where an annual rent is attached to the tenancy, in construction of law, a lease or agreement without limitation to any certain period is a lease from year to year, and both landlord and tenant are entitled to notice before the tenancy can be determined by the other. This notice must be given at least three months before the expiration of the current year of the tenancy. When once the tenant is in possession, he has a right to remain for a whole year; and if no notice be given at the end of the first three quarters of his tenancy, he will have to remain two years, and so on for any number of years. In all agreements it is safer for either landlord or tenant to stipulate that the tenancy may be determined by three or six months' notice as the case may be.

Tenancy by sufferance.—This is a tenancy, not very uncommon, arising out of the unwillingness of either party to take the initiative in a more decided course at the expiry of a lease or agreement. The tenant remains in possession, and continues to pay rent as before, and becomes, from sufferance, a tenant from year to year, which can only be terminated by one party or the other giving the necessary three calendar months' notice to

quit at the term corresponding with the commencement of the original tenancy. This tenancy at sufferance applies also to an under tenant, who remains in possession.

Leases.

A Lease is an instrument in writing, by which one person grants to another the occupation and use of lands or tenements for a term of years for a consideration, the lessor granting the lease, and the lessee accepting it with all its conditions. A lessor may grant the lease for any term less than his own interest—for instance, one day—otherwise the grant will operate as an assignment, and as the rent is incident to the reversion, and the grantor would in that case have no reversion, he could not at law recover his rent.

Leases are frequently burdened with a covenant not to underlet without the consent of the landlord; this is a covenant sometimes very onerous, and to be avoided, where it is possible, by a prudent lessee. An underletting to mere lodgers or inmates, would not, however, work a forfeiture of the lease, unless expressly provided.

A lease for any term beyond three years, whether an actual lease or an agreement for one, must be in the form of a deed; that is, it must be "under seal;" and all assignments and surrenders of leases must be in the same form, or they are *void at law.* Thus an agreement made by letter, or by a memorandum of agreement, which would be binding in most cases, would be valueless when it was for a lease, unless under hand and seal.

The law declares that a tenant is not bound to repair damages by tempest, lightning, or other natural casualty, unless there is a special covenant to that effect in the lease; only the repairs of injuries through voluntary negligence fall upon the tenant.

The special laws in relation to tenant and landlord vary in the different States and it would be useless to specify them here. In general they are in favour of the tenant.

Form of a Lease.—Most stationers have on hand, and all will procure, when requested, a printed form, in accordance with the laws of the State, for leases. As it is much better to purchase two of these (one for the tenant, and one for the landlord), and fill in the names in them, than to write out any form from a book, we think it useless to give any here.

Bills of Exchange.

A bill of exchange is a writing, in which one party, termed the drawer, requires another party, called the acceptor, to pay to his order a sum of money named in the bill. If it falls due on a Sunday or other holiday, it is payable on the preceding day. A bill must be paid in cash, and not by check, but if the holder of the bill agrees to take payment by a check he is entitled to hold the bill until the check is paid. If it is payable at a certain time after sight, it must be presented so that the time may thereupon begin to run.

The term *Draft* is applied to a written order when both drawer and acceptor reside in the same state or country, the term bill of exchange being restricted usually to orders addressed to persons residing in a foreign state or country. A bill of exchange continues negotiable until paid at or after maturity by the acceptor or party pecuniarily liable. There are three days of grace granted to an acceptor of a bill of exchange, unless in the case of a bill payable "on demand," or (in some states only) "at sight."

Most bills of exchange, for greater security, are made out in triplicate, as the "*first* of exchange," the "*second* of exchange," the "*third* of exchange"—the date and wording of each being the same, the only difference being the number of exchange.

Form of a Bill of Exchange.

$200

New York, August 15th, 1872.

Sixty days after sight of its *first* of exchange (second and third of the same tenor and date not paid), pay to the order of Charles Smith and Co., of London, England, the sum of two hundred dollars, value received, and charge the same to account of

To Mr. F. G., of B. DANIEL LAMBERT.

Accommodation Bills.

The regular bill of exchange must contain on the face of it that it is given for "value received," that is, in consideration of certain goods or chattels having been delivered to the acceptor. Accommodation, or "wind bills" as they are frequently called, are resorted to for the purpose of raising money where no value is given, but one party lends merely his name for the use of another. For example, A owes B nothing, but he accepts B's bill. In order to get the money for the bill recourse is had to C, a banker or money-lender. If A dishonours the bill C can enforce payment from B, but if this be the case B cannot recover from A if he can prove that the bill was granted without value received.

The Bill of Sale.

This is an instrument by virtue of which one party is enabled in a formal manner to convey to another party all the right and interest which he may have in the goods or chattels mentioned therein; such as stock-in-trade, the goodwill of a business, or the like. The granting of bills of sale should only be resorted to in cases of extreme necessity, as the grantor's credit is most seriously endangered. If, however, it be imperative, application should be made to any respectable lawyer, and he will give advice on the subject.

Law of Assignment.

An assignment of stock-in-trade includes only those articles which were possessed by the assignor at the time when his assignment was executed, and does not include articles which he may afterwards acquire, even although it is so expressed in the assignment. An order by a creditor on his debtor, to pay the amount of his debt to a third person, is an effectual assignment of the debt, should the debtor express his willingness to pay it, and the creditor cannot make the order. When a person lends money on the security of a policy of insurance on the life of the borrower, the lender should take care that notice, under the hand of the borrower, be given to the insurance office. Without such notice, should the borrower become bankrupt, the lender will have no security for his money; and should the borrower die, the insurance office cannot be compelled to pay any portion of the sum assured to the lender.

When an assignment is made of real estate, mortgages or bonds, a record is made in the offices in the same manner as if a sale had been made. When the assignment is made as a collateral security for a note, a memorandum to that effect is to be made on the back of the note, stating that the assignment is to be cancelled when the note is paid on maturing.

The Law of Life and Fire Insurance.

Speculative policies of insurance are illegal. A wife may insure the life of her husband; a husband may insure the life of his wife; a creditor may insure the life of his debtor. The consent of the assured must in each be obtained. A person about to effect an insurance upon his life must answer the questions proposed to him with accuracy; any false representation makes the policy void. Some insurance companies declare their policies "indisputable," but no contract can be made which is indisputable in law. A policy is not vacated by the suicide of the assured in a state of insanity. When a person lends money on the security of a policy of insurance, the lender should have the custody of the policy, and give notice to the insurance office that the loan has been made and the policy assigned.

An insurer against fire must not alter his premises so that they no longer agree with the description of them in the policy; when material alterations are contemplated, notice should be given to the insurers. A fire insurance policy only protects goods so long as they remain in the same house as when the policy was effected. On a change of residence notice should be given to the insurance agent, and the policy will be altered accordingly.

Breach of Promise of Marriage.

The common law does not altogether discountenance long engagements to be married. If parties are young, and circumstances exist showing that the period during which they had agreed to remain single was not unreasonably long, the contract is binding upon them; but if they are advanced in years, and the marriage is appointed to take place at a remote and unreasonably long period of time, the contract would be voidable, at the option of either of the parties, as being in restraint of matrimony. If no time is fixed and agreed upon for the performance of the contract, it is in contemplation of law *a contract to marry within a reasonable period after request.*

Either of the parties, therefore, after the making of such a contract, may call upon the other to fulfil the engagement; and in case of a refusal, or a neglect so to do on the part of the latter within a reasonable time after the request made, the party so calling upon the other for a fulfilment of the engagement may treat the betrothment as at end, and bring an action for damages for a breach of the engagement. If both parties lie by for an unreasonable period, and neither renew the contract from time to time by their conduct or actions, nor call upon one another to carry it into execution, the engagement will be deemed to be abandoned by mutual consent, and the parties will be free to marry whom they please.

The Roman Law very properly considered the term of two years amply sufficient for the duration of a betrothment; and if a man who had engaged to marry a girl did not think fit to celebrate the nuptials within two years from the date of the engagement, the girl was released from the contract.

American and English Law Terms.

Action.—A general name for the various processes or forms of suit adopted for the recovery of supposed rights.

Ad Inquirendum.—A judicial writ, commanding inquiry to be made of anything relating to a pending cause.

Administrator.—One who has committed to his care, for the purpose of legal distribution, the goods of a person dying intestate.

Appeal.—The removal of a cause from an inferior court to a superior court.

Arbitration.—A method of deciding matters in dispute, by the mediation and award of a third person, and so avoiding legal expense.

Arraignment of a Prisoner.—Reading the indictment and asking the prisoner whether he is guilty or not guilty.

Arrest.—The restraint of the person, either in civil or criminal process.

Arrest of Judgment.—To show cause why judgment should be stayed, notwithstanding an adverse verdict.

Arson.—Felonious burning of houses, grain, &c.

Assault.—An attempt or threat to do, with force and violence, a bodily hurt to another.

Assignee.—One to whom certain power or discretion is given.

Assignee in Bankruptcy.—One who collects and distributes bankrupts' effects.

Assignment.—The transfer by one man to another of goods or any specified right or interest.

Assize.—The periodical sittings of the superior courts to try causes.

Assumpsit.—A voluntary promise, by which a man assumes or takes upon himself to perform or pay anything for another.

Attainder.—The stain or corruption of the blood of a criminal condemned to death.

Attaint.—A writ to inquire whether a jury gave a false verdict, that judgment may be reversed.

Attorney.—One regularly appointed by another to transact business for him.

Attorneys-at-Law.—Those who, versed in legal knowledge, have the business of others committed to them.

Bail.—Security given for the appearance when required of a person charged with wrong doing.

Bail-bond.—The document by which one person becomes security for the due performance by another on a specified undertaking.

Bailiff.—An officer appointed to arrest persons for debt.

Bankrupt.—One who is compelled by law to yield up all his property for the satisfaction of his creditors.

Bar.—The part of the court in which the counsel stand to plead; also, the place where the criminals stand to be tried. By "the Bar" is understood the body of barristers, and pleaders generally, as the "Chancery Bar," the "Indian Bar," &c.

Barratry.—Foul practices in law.

Barrister.—A counseller admitted to plead at the bar, and there to undertake the cause of his clients.

Battery.—Violent beating; personal violence.

Benefice.—An ecclesiastical living.

Bigamy.—The having two or more husbands, or wives, at one time.

Bill in Chancery.—A declaration in writing of the grievance for which the plaintiff claims redress.

Bill of Entry.—A document containing an account of goods entered at a custom house.

Bill of Exchange.—A note ordering the payment by the acceptor of a specified sum of money at a certain time and place, in consideration of value received of the drawer.

Bill of Lading.—An acknowledgment and undertaking by the master of a ship that he has received certain goods, and will deliver them to the consignees, in good order and condition.

Bill of Sale.—A deed making over certain personal property in consideration of a loan of money, or other value, and to secure the repayment of such loan.

Bill of Costs.—An attorney or solicitor's bill for proceedings in the courts of law or equity, which are usually *taxed* or examined as to the propriety of the items, by officers appointed for the purpose, prior to which *taxing*, the amount cannot be sued for.

Bond.—A written obligation.

Borough.—A town having corporate rights.

Bottomry.—The borrowing of money by the master of a ship on the bottom or hull of the ship, to be paid with interest if the ship return in safety, but otherwise to be forfeited.

Bontefeu.—One who commits arson; an incendiary.

Bribery.—The purchase and sale of votes; any reward given and received for a dishonest or immoral action.

Brief.—The document by which a counsel is instructed in his client's case.

Burgess.—A citizen or freeman of a corporate town.

Burglary.—The breaking into a dwelling house with felonious intention.

Bye-Law.—A minor rule—which must be consonant to the public law, and for the common benefit—made by a company or other public body.

Capias ad Respondendum.—A writ in the Court of Common Pleas, before judgment, whereby the sheriff is commanded to take the body of the defendant, and keep him safely, and to produce him in court on the appointed day, to answer the charge brought by the plaintiff.

Capias ad Satisfaciendum (or *Ca. Sa.*, as it is commonly called). A judicial writ of execution, commanding the sheriff to take the body of the defendant, issued after judgment and on the defendant's default.

Capias Utlagatum.—A writ against an outlaw.

Caption.—Arrest of the person.

Case.—The statement of the particulars of a plaintiff's claim, or of a defendant's answer to it, with an examination of the witnesses on either side is designated the case of the respective parties.

Cause.—The matter brought before a court of law for trial.

Caveat.—A process to stop probate of a will; a description of an invention or discovery not yet completed.

Certiorari.—An original writ, issued by the Court of Chancery, in Great Britain, and directed to the judges or officers of an inferior court, command-

ing them to certify or return the records of a cause depending before them.

Challenge.—An exception taken by the prisoner in a criminal, and the defendant in a civil case, against one or more of the jurors who are about to try his case. If the challenge be allowed new jurors are substituted for those objected to.

Chancery.—The highest court in England, next to the Parliament. The Court of Chancery, which is called a *Court of Equity*, was instituted for the purpose of proceeding by the rules of equity and conscience, and of moderating the rigour of the common law, the *intention* being considered rather than the words of the law; equity being the correction of that wherein the law, by reason of its universality, is deficient.

Charter.—A written record of things done between parties.

Charter-Party.—An indenture between merchants or owners, and masters of ships, containing the particulars of their contracts.

Chattels.—Personal property, such as money, goods, and moveables generally.

Clerk.—The strict definition of this word is "a person in holy orders;" it is now also applied to any one whose chief occupation is writing.

Client.—Every party to a proceeding at law or equity is termed his attorney's "client."

Codicil.—An addition made to a will, or a supplementary paper, bequeathing property, or explaining or altering some of the bequests contained in the will.

Cognovit Actionem.—An instrument by which a defendant acknowledges the plaintiff's cause against him to be just and true; and, before or after issue, suffers judgment to be entered against him without trial.

Co-heir.—A joint heir with another.

Collateral Descent.—That which descends from a side branch of a family; as from an uncle to a nephew.

Commission.—The warrant or letters patent, which all persons exercising jurisdiction, either ordinary or extraordinary, have to authorise them to hear or determine any cause or action.

Commissioner.—One holding a commission, letters patent, or other lawful warrant, to examine any matters, or to execute any public office.

Committee.—A number of persons to whom the consideration or ordering of any matter is referred.

Commitment—The sending a guilty person to prison, by virtue of a warrant or order.

Compounding Offences.—Receiving some consideration for withdrawing (without the permission of the court in which the offender should be tried) from a prosecution.

Compounding with Creditors.—An agreement by which the creditors, on receipt of a certain sum in the £, release their debtor from his engagements.

Conservator.—A preserver; an arbitrator appointed permanently to adjust differences that may arise between various parties.

Consideratio Curiæ.—The judgment of the court.

Consideration.—The material cause of any contract, without which it would neither be effectual or binding.

Contempt.—A disobedience of the rules, process, or orders of a court—a punishable offence.

Contempt of Court.—A persistent neglect or violation of the orders of a court.

Conveyance.—A deed which passes or conveys land or other real property from one person to another.

Convict.—One found guilty of an offence by the verdict of a jury.

Copyhold.—A tenure nearly equal to a freehold, its requisite being that it has been devised time out of mind by copy of court-roll.

Coram non Judice.—A cause brought and determined in a court, the judges of which have no jurisdiction.

Coroner.—An officer who, with the assistance of a jury, enquires into the cause by which any one came to a sudden or violent death.

Corporation.—Any public body established by Legislative Charter

Costs.—The legal expenses incurred in suits or actions at Law.

Counsellor.—One retained to plead his client's cause in a court of justice.

Count.—A subdivision or part of the plaintiff's declaration in an action.

Court-days.—Days when courts of judicature are open and pleas determined.

Court-roll.—A roll containing an account of the number of lands, &c. on the jurisdiction of a lord of a manor, with a description of the tenants.

Covenant.—The agreement or consent of two or more by deed in writing. If anything be covenanted for that is illegal or imposible to be done, the covenant is void.

Coverture.—The state of a married woman, as being under the protection or power of her husband.

Crim. Con. (or *Criminal Conversation*).—Illicit conversation with a married woman, for which the offending party is liable to an action for damages.

Custom.—A law or right not written, but established by long use.

Damages.—The amount of money assessed upon a defendant, as a remuneration to the plaintiff for the injury done him.

Debenture.—A bond or security for money loans. Debentures were so called from the receipts beginning with the words *Debentur mihi*, &c.

Declaration.—A legal specification on record of the cause of action by a plaintiff against a defendant.

Decree.—The judgment of a court of equity on any bill preferred: a decree may be interlocutory, or final.

Deed.—A written instrument comprehending a contract or bargain: a deed has three essentials—writing, sealing, and delivering.

Default.—Non appearance in court on the day appointed.

Defeasance.—The indorsement containing the conditions (if any) upon which a warrant of attorney is given.

Defence.—A general assertion that a plaintiff has no ground of action.

Defendant.—The party sued in a personal action.

Demesne (pronounced *De-men'*).—A manor house and the lands attached to it.

Demurrer.—A pause or stop put to any action or suit, upon a legal objection raised; which objection must be determined before further proceedings can be taken.

Denizen.—An alien born, who is admitted to residence and to certain rights in a foreign country.

Deposition.—An affidavit in writing.

Devise.—The act of bequeathing; also, whatever is bequeathed by will.

Diocese.—The circuit or bounds of a bishop's jurisdiction.

Disclaimer.—A plea containing an express denial or renunciation of anything.

Disfranchisement.—The act of dispossessing a town or person of its, or his, citizen rights, or of any particular right—as voting, &c.

Distress.—The taking the goods of a tenant in satisfaction for rent due.

Distringas.—A writ, authorising the proper officer to distrain or seize for rent.

Domicile.—A place of permament residence.

Dower or Dowry.—The estate which a woman brings to her husband in marriage.

Draught, or Draft.—The draft or outline of a deed or legal document.

Duress. — Anything done under compulsion, and through unavoidable necessity.

Ejectione Firmæ, or Ejectment.—An action at law, by which a person ousted from the possession of an estate for a length of time may recover that possession.

Enfranchisement.—Admission to the freedom of a corporation or state.

Engross.—To copy in a large fair handwriting.

Entail.—An entailed estate is so settled that it cannot be sold or bequeathed by any subsequent possessor, but descends inalienably on a person and his heirs for ever. Under certain circumstances, however, the entail can be cut off.

Error.—A "writ of error" is a commission to judges of a superior

court, by which they are authorised to examine the record upon which a judgment was given in an inferior court; and, in such examination, to affirm or reverse the same, according to law and justice.

Estreat.—When a bail or recognizance becomes forfeit by any of its conditions being broken, it is estreated: that is, extracted from the record, and sent up to the Exchequer, whence a process or writ will issue to recover the fine.

Evidence.—Proof by the testimony of witnesses on oath, or by writings or records.

Excommunication.—The anathema of the church. Lesser excommunication debars from the Eucharist; greater excommunication is a total excision from the church.

Execution.—A judicial process for obtaining possession of anything recovered by judgment of law; legal distraint for debt, &c.; the act of signing and sealing a legal instrument; death by the law.

Executor, Executrix.—One appointed by a person's last will to dispose of his estate.

Exigent.—A "writ of exigent" requires the sheriff—in cases where a defendant cannot be found, and is believed to have absconded—to proclaim him, and if he does not then appear, he is outlawed.

Ex Officio.—By virtue of office.

Ex Parte.—A statement where only one of the parties concerned in a suit gives an account of a transaction in which two or more are interested.

Ex Post Facto.—Done after another thing—after the fact.

Extra Parochial.—Places which are out of the bounds or limits of a parish, and, therefore, exempt from parish rates or duties.

Fee, and Fee-Simple.—A tenant in fee-simple is one who has lands or tenements to hold to him and his heirs for ever, absolutely and simply, without condition attached to the tenure.

Fees.—Official dues; rewards for professional service.

Felo-de-se.—One who commits self-murder; a suicide.

Felony.—An offence which occasions a total forfeiture of either lands, or goods, or both, at the common law, and which crime is also punishable by death or imprisonment, according to the degree of guilt.

Feme-Coverte.—A married woman.

Feme-Sole.—An unmarried woman.

Feræ Naturæ.—Birds and beasts that are wild, wherein no man may claim a property, unless under such circumstances as are provided for by the game-laws.

Fief.—Lands or tenements held by fealty and homage.

Fieri Facias.—(Commonly known as *Fi. Fa.*) A judicial writ of execution, that lies where judgment is had for debt, or damages recovered in any of the Courts; by which writ the sheriff is commanded to levy the debt and damages on the goods and chattels of the defendant.

Finding a True Bill.—Prior to the commencement of any sessions, the depositions of the witnesses on whose evidence the prisoners have been committed, are transmitted by the magistrates to the place of holding the sessions, with the bills of indictment framed thereon; where a tribunal, called *the Grand Jury*, is sworn to inspect them, and re-examine the witnesses. If this jury consider the charges supported by such evidence as is likely to lead to conviction, they *find true bills* against the prisoners, on which they are brought to trial; otherwise the bills are *ignored*, or quashed.

Fine.—A payment imposed as a penalty; a sum paid to settle a claim or terminate a dispute.

Flaw.—Any error or omission in indictments or declarations, which invalidates the proceedings.

Flotsam and Jetsam are goods lost by shipwreck, and floating on the sea.

Foreclosure.—The term used to express the barring the equity of redemption on mortgages, which *see*.

Forfeiting Recognizances.—When a person binds himself, either personally or by surety, to appear in any

court at a certain time, and does not so appear, the sureties or recognizances are forfeited or estreated (*see* Estreat).

Forgery. — Fraudulently counterfeiting, or altering the signature, seal, mark or writing of any individual, or public body.

Franchise.—The right of voting in elections.

Fratricide.—The crime of murdering a brother; one who murders his brother.

Freehold.—Lands or tenements held in fee, fee-tail, or, at least, for the term of life.

Next Friend.—The legal guardian or nearest relation of a minor.

Glebe Land.—The land, meadows, or pasture, belonging to a parsonage.

Grant.—A gift in writing; an appropriation or conveyance by the government.

Guarantee.—A surety; one who stipulates to see the engagements of another duly performed.

Habeas Corpus. — The expression means literally "you may have the body."—A writ having for its object to bring a party before a court or judge; especially, a writ to inquire into the cause of a person's imprisonment or detention by another, with the view to protect the right to personal liberty;—or a writ for the purpose of delivering an individual from false imprisonment.

Heir.—One who receives, inherits, or is entitled to succeed to the possession of any property after the death of its owner.

Heir-Apparent.—The person who, during the life of the incumbent or present possessor, has the right to succeed, or is first in the line of succession to an estate, crown, &c.

Heir-at-law.—The legal heir; the nearest of kin entitled to succeed to an intestate estate; also, one entitled to claim the residue or remainder after the provisions of the will have been executed.

Heir-Presumptive.—The person who is nearest of kin, and next in succession to the present occupant, [illegible] whose claim to inheritance may be [illegible], as by the birth of a child, or other contingency.

Hereditament.—Property that may be inherited.

Hereditary. — Transmitted, or capable of being transmitted from father to child.

Heriot. — A customary tribute of goods or chattels to the lord of the fee, made on the decease of a tenant.

Heritage.—That which is inherited.

Heritable and Movable Rights. — Terms used in the Scotch law to denote what in England is meant by *real* and *personal* property; real property in England answering nearly to the heritable rights in Scotland, and personal property to the movable rights.

Homicide.—The killing of any human being by the act of man. There are three kinds of homicide—justifiable, exusable, and felonious.

Impanelling.—Writing in a parchment schedule the names of the jury by the sheriff.

Imparlance. — Time given by the court to a party to plead.

Impeachment.—The accusation and prosecution of a person for treason, or other crimes and misdemeanours.

Impropriation.—The act of impropriating; also, a parsonage, or ecclesiastical living in the hands of a layman, or which descends by inheritance.

Incendiary.—A setter of houses on fire.

Incest.—Illicit intercourse, or marriage, with one too near akin.

Incumbent.—The present possessor of a benefice.

Indenture. — A writing containing some contract, agreement, or conveyance, between two or more persons, being indented in the top, answering to another part which has the same contents.

Indictment.—A written accusation of one or more persons of a crime or misdemeanour, preferred to, and presented on oath by, a grand jury.

Indorsement.—Anything written on the back of a deed; the writing a man's name on the back of a bill of exchange. &c.

Induction.—The act of giving to a clergyman the possession of his church.

In Esse.—In being, or actual existence.

In Posse, or in Potentia.—Potential or possible existence.

Infeftment.—Deed or process of putting in possession of heritable property.

Infendation.—Act of putting one in possession of an estate in fee; the granting of titles to laymen.

Inheritance.—An estate which a man has received by descent as heir to another, or which he may transmit to another as his heir.

Injunction.—A writ or process granted by a court of equity, whereby a party is required to do, or to refrain from doing certain acts.

In Propria Persona.—In one's own proper person.

Inquest.—A jury; particularly, a coroner's jury for investigating the cause of a sudden death.

Inrolment.—The registering or entering of any deed, &c., in the rolls of some court.

Instrument.—Any act, deed, or writing, drawn up between two or more parties, and containing covenants to be performed by them respectively.

Interdict.—In Scotch law, an order of the Court of Session, or Sheriff's Court, prohibiting any act, proceedings, sale, publication, &c., challenged as illegal, or infringing any patent or other right.

Interpleader.—A proceeding to enable a person, of whom the same debt, duty, or thing is claimed adversely by two or more parties, to compel them to litigate the right or title between themselves, and thereby determine to which of them he is legally indebted.

Interrogatories.—Questions in writing demanded of a defendant, or of witnesses brought in to be examined in a cause, particularly in the Court of Chancery.

Intestate.—Dying without a will.

Issue.—The specific point in a suit between two parties needing to be determined.

Jetsam.—Flotsam and Jetsam are goods lost by shipwreck, and floating on the sea.

Jointure.—An estate settled on a wife, and which she is to enjoy after her husband's decease for her own life, and in satisfaction of dower.

Judge.—An officer invested with authority to hear and determine causes civil and criminal.

Judge-Advocate.—In courts-martial the person who is appointed to act as public prosecutor.

Judgment.—The sentence of the law pronounced by the court upon the matter contained in the record.

Judgment by Default.—When a defendant does not put in appearance to an action, he is presumed to have no defence, and judgment goes against him by default.

Jurist.—One who treats of matters of law.

Jury.—A number of men, sworn to inquire of and try a matter of fact, and declare the truth upon such evidence as shall be delivered to them in a cause; and who are sworn judges upon matters of fact.

Justices.—Officers deputed by the crown to try causes and administer justice

Justices of the Peace—Officers appointed to maintain the peace in the counties where they dwell.

Justifying Bail.—If the plaintiff or his attorney object to the persons offering themselves as bail, such bail are allowed to "justify" themselves, that is, to swear in court that they are "substantial" in the eyes of the law.

Larceny.—Theft.

Lease.—A conveyance of any lands or tenements, usually in consideration of rent, or other annual recompense, made for a certain fixed time. He who lets is called the *lessor*, and he to whom the lands, &c., are let, the *lessee*.

Leasehold.—Lands or tenements held by virtue of a lease, or conveyance, from the party having a right so to dispose of them.

Legacy.—A bequest or gift in goods and chattels by will. The person to whom it is given is styled the *legatee;* and, if the gift is of the residue of an estate after payment of debts and legacies, he is then styled the *residuary legatee*.

Legem Habere.—To be capable of giving evidence on oath.

Letters Patent.—A grant or deed from the government, securing to a person the exclusive right to an invention for a term of years.

Levari Facias.—A writ of execution directed to the sheriff for levying a sum of money upon a man's lands and tenements, goods and chattels, who has forfeited his recognisance.

Libel.—A malicious defamation, expressed either in printing, or writing, or by signs, pictures, &c., tending either to blacken the memory of one who is dead, or the reputation of one who is alive, and thereby exposing him to public hatred, contempt, or ridicule.

Lineal Descent.—That which goes from father to son, from son to grandson, and so on.

Magna Charta.—The great charter of liberties, rights, and privileges obtained by the English Barons from King John, A.D. 1215.

Mainprise. — The surrendering a person into friendly custody, upon giving security that he shall be forthcoming at the time and place required.

Mandamus.—A writ issued by a superior Court and directed to some inferior tribunal, or to some corporation or person exercising public authority, commanding the performance of some specified duty.

Mandate.—A command; an authority to act.

Maturity.—The being of the age of twenty-one. Bills or Notes for the payment of money, are when due said to have arrived at maturity.

Mesne Process.—Such process as issues pending the suit upon some collateral interlocutory matter, as to summon juries, witnesses, &c.

Misdemeanor. — An indictable offence, which though criminal, does not amount to felony.

Mittimus.—A precept in writing, under the hand and seal of a justice of the peace, directed to the gaoler, for the receiving and safe keeping of an offender till he is delivered by law.

Mortgage.—A pledge or pawn of property as security for a loan.

Mortmain.—Possession of lands or tenements in dead hands. (A term in English law). The "Mortmain Act," passed in the reign of the second George had for its object the prevention of improvident alienations, or dispositions of landed estates, by dying persons, to the disinheritance of their lawful heirs.

Motion in Court.—An application to the Court by the parties or their counsel, in order to obtain some rule or order of Court, which becomes necessary in the progress of a cause.

Municipal Law.—A rule of civil conduct prescribed by the supreme power in a State-corporation or city rule.

Nem. Con. (*Nemine Contradicente.*) —Words used to signify the unanimous consent of the members of Legislature, or other public body, or public meeting, to a vote or resolution.

Ne Recipiatur.—A caveat against receiving and setting down a cause to be tried.

Nil Debet.—A common plea to an action of debt when the money is either paid or not owing.

Nil Dicit.—When judgment is given against a defendant in a civil action, owing to his non-appearance.

Nisi Prius. — Unless before, the first words of the writ or commission to try a civil cause at Westminster, *unless before* that sitting a court was held in the town or county in which the suit lay.

Nolle Prosequi. — An agreement made by the plaintiff, that he will not further prosecute his suit, either as to the whole or a part of the cause of action.

Non Assumpsit.—A plea in personal actions, when the defendant denies that any promise or agreement was made.

Non Compos Mentis.—One not of sound mind, memory or understanding.

Non Damnificatus. — A plea to an action of debt upon bond, with condition to save the plaintiff harmless.

Non Distringendo.—A writ not to distrain—used in various cases.

Non est Factum.—The general issue

in an action on a bond or other deed, whereby the defendant denies that to be his deed whereon he is impleaded.

Non est Inventus.—The sheriff's return to a writ, when he cannot find the defendant.

Nonfeasance.—An offence; an omission of what ought to be done.

Non-Suit.—A renunciation or failure to follow up a suit by a plaintiff or demandant. Most commonly upon the discovery of some error or defect in his case, when the matter is so far proceeded in that the jury are ready to deliver their verdict. Thus the phrase "The plaintiff elects to be non-suited."

Non sum Informatus.—A formal answer made by an attorney, that he is not instructed or informed to say anything material in defence of his client, by which he is deemed to leave the case undefended, and judgment passes against his client.

Notary Public.—A person whose business it is to note and protest bills of exchange, and who also attests deeds and writings.

Noting a Bill.—The course which is taken by the Notary Public when a bill of exchange is refused payment.

Nudum Pactum.—A contract without consideration, such as an agreement to sell goods, land, &c., without any specified terms for the purchase. Such a contract is void in law; and for the non-performance of it no action will lie.

Nuisance.—Anything that is a public or private injury, annoyance, or inconvenience.

Parol.—Word of mouth; verbal.

Perjury.—The crime of swearing falsely.

Plaintiff.—The person at whose suit a plaint or complaint is made.

Plea.—The defendant's answers to the plaintiff's declaration.

Pleadings.—The mutual altercations between the plaintiff and defendant in a suit; which are set down and delivered into the proper office in writing.

Police.—That branch of administrative justice which extends to the prevention of crimes, by watching over public order, preventing breaches of the peace, removing nuisances, &c.

Posse Comitatus.—The power of the county. This includes the aid and attendance of all men, except ecclesiastics and inferior persons, above the age of fifteen, within the county; which force may be used in cases of riot or rebellion, or where any resistance is made to the execution of justice.

Practice of the Courts.—The form and manner of conducting and carrying on suits or prosecutions at law or in equity, civil or criminal, through their various stages, from the commencement of the process to final judgment and execution, according to the principles of law, and the rules laid down by the several courts.

Præcipe.—In actions of *covenant, debt,* and *detinue,* the original writ is called a præcipe, by which the defendant has an *option* given him, either to do what he is required, or show cause to the contrary.

Oath.—An affirmation or denial of anything before one or more persons who have authority to administer the same, for the discovery and advancement of truth and right, calling God to witness that the testimony is true.

Obligation.—A bond, containing a penalty, with a condition annexed for payment of money, performance of covenants, &c.

Onus Probandi.—The burden of proving.

Outlawry.—The act or process by which a person is excluded from, or deprived of, the benefit and protection of the law.

Overt Act.—An open act, capable of being sustained by legal proof.

O Yes.—A corruption of the French *oyez,* hear ye! The term used by a public crier, to enjoin silence and attention.

Pains and Penalties.—A bill of pains and penalties is an Act of Parliament specially made to attaint one of treason, or felony, or to inflict punishment beyond or contrary to the law then in force.

Panel.—The slip containing the

names of such jurors as have been returned by the sheriff to serve on trials.

Prescription.—A title acquired by use and time, and allowed by law.

Probate.—Official proof of a will.

Process.—The method taken by the law to enforce a compliance with the original writ, of which the primary step is, to give the person notice to obey it.

Proclamation.—An official declaration.

Proctor.—An attorney, employed in ecclesiastical cases.

Pro Forma.—As a matter of form.

Pro Rata.—In proportion.

Protest.—The declaration of a public notary of the dishonour of a bill.

Proviso.—A condition inserted in a deed, on the due performance of which the validity of the deed depends.

Puisne.—Younger or inferior. In England said of the inferior judges of the Queen's Bench, Exchequer, and Common Pleas.

Pursuer.—Term used in Scotland for plaintiff.

Quantum Meruit.—"As much as he deserved;" that is—what can be recovered by a man who does work for another without agreement as to recompense.

Quantum Valebant.—"As much as it is worth;" that is—what can be recovered when goods are delivered by a tradesman at no certain price.

Quash.—To overthrow or annul.

Quarantine.—The term of forty days during which a ship arriving in port, and suspected of being infected with a malignant contagious disease, is obliged to forbear all intercourse with the shore, and is not allowed to land her passengers or crew.

Quasi Contract.—An implied contract.

Quietus.—Freed or acquitted.

Quid pro quo.—Mutual consideration.

Quorum.—Certain individuals among persons invested with any power, or with the exercise of any jurisdiction, without *whom* any number of the others cannot proceed to execute the power given by the commission.

Rack-Rent.—The full yearly value of the land or house rented.

Ranger.—An officer of the forest, whose duty it is to prevent trespasses, and preserve beasts of chase, &c. within the boundaries.

Rebutter.—The answer of defendant to the surrejoinder of plaintiff.

Recaption.—The taking a second distress of one formerly distrained during the plea grounded on the former distress.

Recital.—The rehearsal, or making mention, in a deed or writing, of something which has been done before.

Recognisance.—An obligation of record which a man enters into before some court of record, or magistrate duly authorized, with condition to do some particular act; as, to appear at the assizes, to keep the peace, to pay a debt, or the like.

Record.—A memorial or remembrance. An authentic testimony, in writing, contained in rolls of parchment, and preserved in a court of record.

Refresher.—The fee given to barristers as a retaining fee, when the cause has been deferred from the sittings at which they were retained to plead it.

Rejoinder.—The answer or exception of a defendant in any action to the plaintiff's replication.

Release.—An instrument, whereby estates or other things are transferred, abridged, or enlarged; and whereby a man quits and renounces that which he before had. The words generally used in releases are, *remised, released, and for ever quit claimed.*

Remedy.—The action or means given by law for recovery of a right.

Replevin.—A remedy, grounded and granted on a distress; being a redeliverance of the thing distrained, to remain with the first possessor, on security (or pledges) given by him to try the right with the distrainer, and to answer him in a course of law.

Replication.—An exception or answer to the defendant's plea.

Report.—A public relation of cases judiciously adjudged in courts of justice, with the reasons as delivered by the judges.

Reports.—Decisions on legal issues, with a summary of the proceedings,

preserved as authentic records in the archives of the several courts, and forming a set of books for the use of members of the legal profession.

Reprieve.—A suspension of the execution, when sentence of death has been passed on a criminal; and is ordered by the judge, on grounds favourable to the prisoner, which may arise from various causes.

Rescue.—A resistance against lawful authority.

Respondent.—One who answers or defends a suit.

Retaining Fee.—The first fee given to counsel, in order to make sure that he shall not engage on the other side.

Return of a Writ.—The certificate of the sheriff made to the court of what he has done towards the execution of any writ directed to him.

Reversal.—The making a judgment void, in consequence of it having been given in error.

Reversion.—The residue of an estate left in the grantor, returning to him or his heirs and assigns after the grant is over.

Riot.—A tumultuous disturbance of the peace by three persons, or more, assembling together of their own authority.

Royal Assent.—The concurrence of the Sovereign to any bill that has passed the two houses of Parliament, and which is necessary to render it a statute, or Act of Parliament, (Eng.)

Schedule.—An inventory of goods, or any scroll of parchment containing particulars left out in the main writing.

Scire Facias.—A judicial writ, for the purpose, generally, of calling a man to show cause to the court whence it issues why execution of judgment passed should not be made out.

Se Defendendo.—"I struck in my own defence"—a plea of justification entered for a person charged with killing another.

Seisin.—Possession.

Sequestration.—State of being set aside; the act of taking a thing away from the parties intrusted with it, and intrusting it to a neutral party.

Session.—The term of a sitting of justices.

Set-off.—A mode of defence whereby the defendant acknowledges the justice of the plaintiff's claim on the one hand, but on the other, sets up a claim of his own to counterbalance it, either in whole or in part.

Sheriff.—The chief officer in every shire or county.

Simony.—The corrupt presentation of any one to an ecclesisastical benefice, for money, gift, or reward.

Socage.—A tenure of lands or tenements by a certain determinate service.

Solicitor.—One admitted to practise in a Court of Chancery or Equity, corresponding to an attorney in common Law Courts.

Stoppage in Transitu.—The act of legally stopping goods on the road.

Subornation.—The offence of hiring persons to give false evidence.

Subpœna.—A writ commanding the attendance in court of the person on whom it is served, as a witness, &c., under a penalty.

Suit.—An action-at-law.

Supersedeas.—A command to stay some ordinary proceedings at law, on good cause shown, which ought otherwise to proceed.

Supplicavit.—A writ issuing out of Chancery for taking surety of the peace, where one is in danger of a bodily injury from another.

Surrejoinder.—A second defence of the plaintiff's declaration in a cause, and is an answer to the rejoinder of the defendant.

Tenant.—One who holds or possesses lands or tenements by any kind of title.

Tenement.—In its original, proper, and legal sense, signifies anything which may be *holden*, provided it be of a permanent nature; but, in its narrowest sense, it means merely a house or homestead.

Tenendum.—That clause in a deed wherein the tenure of the land is created and limited.

Tenure.—The manner whereby lands or tenements are holden. The instrument by which an inheritance is held.

Title.—The right to property.

Tort.—Action for injury to the person.

Translation. — The removing of a bishop from one diocese to another.

Treason. — An offence against the dignity and majesty of the commonwealth; disloyalty; betraying the state into the hands of a foreign power.

Trespass.—Wrongful or unauthorized entry on another's premises.

Trial.—The examination of a cause, civil or criminal, before a judge, who has jurisdiction of it, according to the laws of the land.

Trover.—An action which lies where one man gets possession of the goods of another, by delivery, *finding*, or otherwise, and refuses to deliver them to the owner, or sells or converts them to his own use, without the consent of the owner; for which the owner, by this action, recovers the value of his goods.

Trust.—A right to receive the profits of land, &c. (and sometimes to dispose of it), for particular purposes, as directed by the lawful owner, or pointed out by settlement, or by that deed of conveyance which created the trust. A *trustee* is the person appointed by the deed to hold possession of, or sell, the property therein described, for the uses stated.

Umpire.—A third person chosen to decide a matter in dispute, left to arbitration, in case the arbitrators should not agree.

Usury.—The extortion of unlawful gain or interest.

Vacation.—The time that elapses between the end of one law term and the beginning of another.

Venditioni exponas.—A judicial writ, directed to the sheriff, commanding him to sell goods of which he has formerly taken possession, for the satisfying a judgment given in court.

Vendor and *Vendee.*—A vendor is the person who sells, and a vendee the person who buys, any thing.

Venire Facias. — A judicial writ awarded to the sheriff to cause a jury in the neighbourbood to appear, when a cause is brought to issue, to try the same.

Venue.—Neighbourhood; locality.

Verdict.—The finding of the jury in a cause.

Viva Voce.—Verbal examination in open court.

Void.—The legal phrase for a nullity.

Warrant.—A precept empowering the arrest of an offender.

Warrant of Attorney.—An authority and power given by any one to an attorney, to appear and plead for him; or to suffer judgment to pass against him, by confessing the action.

Warranty.—An undertaking that the article sold answers to the description given of it by the seller to the buyer.

Will.—A will is the legal declaration of a man's intention of what he *wills* to be performed *after* his death.

Writ.—A judicial summons.

IX. TRADE; SOCIAL AND SCIENTIFIC FACTS.

Titles and other Abbreviations.

A.B.—(Artium Baccalaureus). Bachelor of Arts.
A.M.—(Artium Magister). Master of Arts. (Ante Meridiem.) Before noon.
A.M.—(Anno Mundi). In the year of the world.
A.U.C.—(Ab urbe Condita). From the building of the city (Rome).
B. D. — (Baccalaureus Divinitatis). Bachelor of Divinity.
B.M.—(Baccalaureus Medicinæ). Bachelor of Medicine.
B.Sc. — (Baccalaureus Scientiarum). Bachelor of Sciences.
C. Cent.—(Centum). A hundred.
Clk.—(Clericus). Clergyman.
C.R.—(Custos Rotulorum). Keeper of the Rolls.
D.D.—(Doctor Divinitatis). Doctor of Divinity.
D.C.L.—(Doctor Civilis Legis). Doctor of Civil Law.
D.V.—(Deo volente). God willing.
e.g.—(Exempli gratia). For example.
Ibid.—(Ibidem). In the same place.
i.e.—(Id est). That is.
Incog.—(Incognito). Unknown; concealed.
I.H.S.—(Jesus Hominum Salvator). Jesus the Saviour of men.
LL.D.*—(Legum Doctor). Doctor of Laws.
L.S.—(Locus Sigilli). The place of the Seal.
L.S.D. — (Libræ, Solidi, Denarii). Pounds, Shillings, Pence.
M.D.—(Medicinæ Doctor). Doctor of Medicine.
M.S.—(Memoriæ Sacrum). Sacred to the Memory.
N.B.—(Nota bene). Note well; or, North Britain.
Nem. con.—(Nemine contradicente). No one opposing it.
Per cent. —(Per centum). By the hundred.

*Caution—*not* L.L.D.

S.C.—(Senatus Consultum).—A decree of the Senate.
S.T.P.—(Sanctæ Theologiæ Professor). Doctor of Divinity.
P.M.—(Post meridiem). After midday.
Pp.—(Paginæ). Pages; *not* P.P.
Prox.—(Proximo). Next month.
P.S. — (Post scriptum). Postscript (written after).
Q.E.D.—(Quot erat demonstrandum). Which was to be proved.
Sc.—(Scilicet). To wit.
Ult.—(Ultimo). In the last month.
V.R.—(Victoria Regina). Queen Victoria.
Vid.—(Vide). See.
Viz.—(Videlicet).—To wit.
&c.—(Et Cætera). And the rest.
Et seq.—(Et quæ sequuntur). And those which follow.
Abp.—Archbishop.
Acct.—Account.
Admrs.—Administrators.
Anon.—Anonymous.
A.R.A.—Associate of the Royal Academy.
B.A.—Bachelor of Arts.
Bart.—Baronet.
Bp.—Bishop.
Capt.—Captain.
C.B.—Companion of the Bath.
C.P.—Common Pleas.
Ch.—Chapter.
Co.—County; or Company.
Col.—Colonel.
Comr.—Commissioner.
Cr.—Creditor.
Do.—Ditto; the same.
Dr.—Debtor; or Doctor.
E.—East.
E.L.—East Longitude.
Exch.—Exchequer.
Esq.—Esquire.
F.A.S.—Fellow of the Antiquarian Society.
F.R.S.—Fellow of the Royal Society.
F.R.G.S.—Fellow of the Royal Geographical Society.

F.L.S.- Fellow of the Linnæan Society.
Gen.—General.
Gent.—Gentleman.
Hhd.—Hogshead.
H.M.—Her or His Majesty.
Inst.—Instant; present month.
J.P.—Justice of the Peace.
Knt.—Knight.
K.G.—Knight of the Garter.
K.C.B.—Knight Commander of the Bath.
K.G.C.B.—Knight Grand Cross of the Bath.
K.P.—Knight of St. Patrick.
K.S.I.—Knight of the Star of India.
K.T.—Knight of the Thistle.
Lieut.—Lieutenant.
M.A.—Master of Arts.
Messrs.—Gentlemen.
M.P.—Member of Parliament.
Mr.—Master (commonly, Mister).
Mrs.—Mistress.
MS.—Manuscript. MSS.—Manuscripts.
N.S.—New Style, (1752).
No.—Number.
N.L.—North Latitude.
N.T.—New Testament.
N.—North. N.E., North east. N.W., North west.
O.S.—Old Style.
8vo.—Octavo.
4to.—Quarto. 12mo, Duodecimo.
Fol.—Folio.
O.T.—Old Testament.
oz.—Ounce.
Prof.—Professor.
Q.—Question.
Qy.—Query.
Q.B.—Queen's Bench.
Q.C.—Queen's Counsel.
Rev.—Reverend. Rt. Rev.—Right Reverend.
Rt. Hon.—Right Honourable.
R.A.—Royal Academician. A.R.A.—Associate of the Royal Academy.
R.H.A.—Royal Horse Artillery.
R.E.—Royal Engeneers.
R.M.—Royal Marines.
R.N.—Royal Navy.
S.—South. S.E., South east. S.W., South west.
Sec.—Secretary. Hon. Sec., Honorary Secretary.
S.L.—South Latitude.
St., Ste., or S.—Saint.
U.S.—United States.
W.—West.
W.L.—West Longitude.
Xmas.—Christmas.

Latin Phrases in Constant Use.

A fortiōri,—with stronger reason.
A posteriōri,—an argument from the effect to the cause.
A priōri,—from the cause to the effect.
Ab initio,—from the beginning.
Ab urbe conditā,—from the building of the city (Rome).
Ad absurdum,—bringing the contrary opinion to be an absurdity.
Ad captan'dum vulgus,—to catch the rabble.
Ad eundem (e-un'-dem),—to the same; to a like degree (M.A., &c.).
Ad infinītum,—to infinity.
Ad lib'ĭtum,—at pleasure.
Ad referendum,—to be referred to or considered again.
Ad valōrem,—in proportion to the value.
Adden'dum, pl. Addenda,—to be added; additions to a book.
Agenda,—things to be done.
Alĭas,—otherwise.
Alĭbi,—elsewhere.
Alma mater,—a kindly mother; a term applied to the University, where one was educated.
Anath'ĕma, (Gr.),—curse.
Anglicĕ,—in English.
Anno Domini, (A.D.),—in the year of our Lord.
Anno mundi,—in the year of the world.
Ante meridiem (A.M.),—before noon.
Anthropoph'ăgi, (Gr.)—maneaters.
Apex, pl. Apĭces,—the top of anything.
Aqua (a'-kwa),—water.
Aqua vitæ,—eau-de-vie, or brandy.
Argumentum ad hom'inem,—an argument to the man (a personal argument).
Argumentum baculīnum,—the argument of the cudgel.
Armĭger,—one bearing arms; a gentleman.
Audi altĕram partem,—hear the other side.
Aut Cæsar aut nullus,—either Cæsar or nobody.
Bona fidĕ,—in good faith.
Cacŏe"thes loquen'di,—an itch for speaking.
Cac'ŏe"thes scribendi,—a bad habit, an itch for writing.

Cætera desunt,—the rest is wanting.
Cæteris paribus,—other circumstances being equal.
Caměra obscūra,—an optical instrument used in a *darkened* chamber for exhibiting objects without.
Capias,—a writ of execution; literally, *take thou.*
Caput mortŭum,—the worthless remains.
Caret,—a mark (∧), to denote that something is *wanting.*
Cavĕat,—a kind of process in law, to stop proceedings; a caution.
Cognōmen,—a surname, a family name.
Com'pos men'tis,—of sound mind.
Con'tra,—against; contrary to.
Cor'nucopia,—the horn of plenty.
Corrigen'da,—things or words to be corrected.
Cui bono?—for whose good?
Cuique suum,—to every man his own.
Cum privilēgio,—with privilege.
Curren'tī calămo,—with a running pen; right off.
Custos rotulo'rum,—keeper of the rolls or records.
Data,—things granted.
De facto,—in fact or reality.
De jure,—in law or right.
De mor'tuis nil nisi bonum,—of the dead say nothing but what is good.
De novo,—a new; over again.
Def'ĭcit,—a want or deficiency.
Dei gratiâ,—by the grace of God.
Dēlē (d),—blot out or erase.
Delta,—the Greek letter Δ; a *triangular* tract of land at the mouth of a river.
Deo volente,—(D.V.), God willing or permitting.
Desideratum, pl Desiderata,—a thing or things desired or wanted.
Dexter,—the right hand.
Dictum,—a positive assertion.
Distringas,—a writ for distraining.
Divĭdĕ et impĕra,—divide and govern.
Dramătis personæ,—the characters in a play.
Duodecimo (du-o-dess'-e-mo),—twelve leaves to the sheet.
E plurĭbus unum,—one out of many. Motto of the United States.
Ec'ce Homo,—behold the man.
Ec'ce signum,—behold the sign.
Equilibrium,—equality of weight.
Ergo,—therefore.
Errātum, pl. Errāta,—a mistake or mistakes.
Esto perpetua,—may it last for ever.
Et cætera (&c.),—and the rest.
Ex cathedra,—from the chair.
Ex nihĭlo nihil fit,—from nothing nothing comes.
Ex officio,—officially.
Ex parte,—on this side only; partial.
Ex post facto,—from something done afterwards as a law applied to a crime committed before the law was made.
Ex tempŏrĕ,—without premeditation; off-hand.
Excerpta,—extracts from a work.
Exempli gratia (e.g.),—for example.
Exeunt omnes,—all go off.
Exit,—he goes off; departure.
Exuviæ,—cast skins of animals.
Fac simile,—an exact copy.
Felo de se, (Sp.),—a murderer of one's self, self-murder.
Fieri facias (fi. fa.) (fi'-e-ri-fa''-she-ass),—a writ to the sheriff to levy debt or damages.
Finem respĭce,—look to the end
Flagrante delicto,—during the commission of the crime.
Fortiter in re,—firm in action.
Genera,—the plural of genus.
Habeas corpus,—a writ directing a gaoler to *have* or produce the *body* of a prisoner before the court.
Haud passibus æquis,—not with equal steps.
Hortus siccus (a dry garden),—a collection of specimens of dried plants.
Humānum est errāre,—it is human to err.
Ibĭdem,—in the same place.
Id est (i.e.),—that is.
Idem,—the same.
Ignis fatŭus,—will-o'-the-wisp; literally, a delusive fire.
Imperium in imperio,—a government within a government.
Imprĭmātur,—let it be printed.
Imprĭmis,—in the first place.
Impromptu,—without premeditation; off-hand.
In esse,—in actual existence.
In forma paupĕris—as a pauper.
In foro conscientiæ,—before the tribunal of conscience.
In limĭne,—at the outset.
In posse,—in possible existence.

In propria persōna,—in person.
In re,—in the matter or business of.
In terrōrem,—as a warning.
In-toto,—entirely.
In transĭtu,—on the passage.
In vino verĭtas,—there is truth in wine.
Index expurgatorius,—(a purifying index), a list of prohibited books.
Infra dignitatem,—beneath one's dignity.
Instanter,—instantly.
Intērim,—in the meantime.
Interregnum,—the period between two reigns.
Ipse dixit,—mere assertion (he himself has said).
Ipso facto,—by the fact itself.
Item,—also; an article in a bill or account.
Jurĕ divīno,—by Divine right
Jurĕ humāno—by human law.
Jus gentium,—the law of nations.
Lapsus linguæ,—a slip of the tongue.
Laus Deo,—praise be to God.
Lex talĭonis,—the law of retaliation, an eye for an eye, &c.
Libra,—a balance; a sign of the zodiac.
Locum tenens,—holding the place of another; a lieutenant or deputy.
Lit'era scripta manet,—what is written remains.
Litera'tim,—letter by letter; literally.
Lusus naturæ,—a freak of nature.
Magna Charta (pronounced Karta),—the great charter.
Malum in se,—and evil in itself.
Manda'mus,—in law, a writ from a superior court; literally, *we command.*
Ma'nes,—departed spirits.
Materia med'ica,—substance, used in the preparation of medicine.
Maxĭmum,—the greatest.
Memento more',—remember death.
Memorabilia,—things to be remembered.
Mens conscia recti,—a mind conscious of right.
Mens sana in corpŏre sano,—a sound mind in a sound body.
Meum et tuum,—mine and thine.
Min'ĭmum, the least.
Mit'tĭmus (we send),—a warrant for committal to prison.
Modŭs operandi,—the mode or manner of operating.
Multum in parvo,—much in little.
Ne exeat regno,—let him not leave the kingdom.
Ne plus ultrá,—no farther, the utmost point.
Ne quid nimis,—too much of one thing is good for nothing.
Ne sutor ultra crep'ĭdam,—the shoemaker should not go beyond his last.
Nec temere nec timĭde,—neither rashly nor timidly.
Necro'sis, *Gr.*,—mortification or deadness.
Nem'ĭne contradicente (nem. con.),—none opposing.
Nolens volens,—"willy nilly."
Noli me tangere,—touch me not.
Non compos mentis—not of sane mind.
Non est inventus,—he is not found; a return to a writ.
Non obstante,—notwithstanding.
Nosce teipsum—know thyself.
Notā bene (N.B.),—mark well.
Nunc aut nunquam,—now or never.
Obĭter dictum,—a casual remark.
Omnibus,—for all.
Onus probandi,—the burden of proof
Ore tenus—as far as the mouth.
Otium cum sine dignitate,—leisure with dignity; *sine*, without.
Par nobĭle fratrum,—a noble pair of brothers (ironically).
Pari passu,—with equal pace.
Passim,—everywhere.
Pecca'vi,—I have sinned.
Pendente līte,—the suit pending.
Per cent. (for centum),—by the hundred.
Per saltum,—by a leap.
Per fas et nefas,—through right and wrong.
Per se,—by itself.
Pinxit,—painted it.
Posse comĭta'tus,—the civil force of the country.
Post meridiem (P.M.),—after midday.
Postŭla'ta,—things required
Prima facie,—at the first view.
Primitiæ (pri-mish'-e-e),—first fruit.
Primum mobĭle,—the first mover.
Princip'ia,—first principles.
Princip'is obsto,—oppose beginnings.
Pro ariset focis,—for our altars and hearths.
Pro re nata,—according to exigencies.
Pro bono publĭco,—for the public good.
Pro et con (contra),—for and against.

Pro forma,—for form's sake.
Pro hac vice,—for the occasion.
Pro tempŏre,—for this time.
Probātum est,—it has been proved.
Quantum libet,—as much as pleases you.
Quantum suffĭcit,—as much as is sufficient.
Quantum valeat,—as much as it may be worth.
Quid nunc? (what now?), a newsmonger.
Quid pro quo,—something for something.
Quod erat demonstrandum; or, Q.E.D., —that which was to be proved.
Quondam,—formerly.
Re infectâ,—without accomplishing the matter.
Recipe (ress'ē-py),—*take thou*, the first word of a physician's prescription, and hence the prescription itself.
Requiescat in pa'ce,—may he rest in peace.
Respice finem,—look to the end.
Resurgam,—I shall rise again.
Scandalum magnātum,—scandal against high rank.
Scil'ĭcet (sc),—to wit, namely.
Sci're facias,—cause it to be known, or show cause.
Secundum artem,—according to art.
Semper idem,—always the same.
Seria'tim,—in regular order.
Sic passim,—so everywhere.
Sine diē,—without fixing a day.
Sine qua non,—without which not; a necessary condition.
Statu quo,—in the same state in which it was.
Sua cuique voluptas,—every one has his own pleasure.
Suavĭter in modo, fortĭter in re,—gently in manner, firmly in acting.
Sub pœna,—under a penalty.
Sub silentio,—in silence.
Sui generis,—the only one of the kind; singular.
Summum bonum,—the chief or supreme good.
Tabula rasa,—a smooth tablet; a mere blank.
Tædium vitæ,—weariness of life.
Te Deum,—a hymn of thanksgiving; so called from the two first words.
Tempŏra mutantur,—times change.
Totĭdem verbis,—in just so many words.
Toties quoties,—as often as.
Toto cœlo,—by the whole heaven; as far as the poles asunder.
Tria juncta in uno,—three joined in one.
Ultĭma ratio regum,—the last reason of kings; that is war.
Ultimo (ult.),—the last month.
Una voce,—with one voice.
Utile dulci,—the useful with the agreeable.
Vacuum,—an empty space.
Vade mecum,—come with me; a companion.
Væ victis!—woe to the vanquished.
Verbatim,—word for word.
Versus,—in law, against.
Veto (I forbid),—a prohibition.
Vi et armis,—by main force.
Via,—by the way of.
Vice,—in the stead or room of.
Vice versa,—the opposite.
Vidē,—see; refer to.
Vis inertiæ,—the force of resistance of inanimate matter.
Vivâ voce,—orally; by word of mouth.
Viz. (videlicet),—to wit.
Vox et prætera nihil,—voice (or sound) and nothing more.
Vivat Regina!—Long live the Queen.

French and other Phrases in Frequent Use.

Abattoir (a-bat-twar'),—a public slaughter-house.
Abbé (abbey),—an abbot.
Aide-de-camp (aid'-d'-cōng),—an officer attending a general.
A la mode (ah-la-mŏde),—in the fashion
Alguazil (ăl'-ga-zeel),—a Spanish policeman.
Alto relievo, *It.*,—high relief (in sculpture.)
Amateur (ahm-at-ehr),—a lover of any art or science; not a professor.
Amende (a-mŏngd'),—amends.
Andante, *It.*,—moderately slow
Antique (an-teek'),—ancient.
Apropos (a-pro-po),—to the purpose.
Assignat (as'-sin-ya),—paper-money issued during the Revolution.
Attaché (at-ta-sha'),—one attached to an ambassador.
Au fait (ō-fay),—master of the subject.
Auto da fé, *Sp.*—(burning to death), an act of faith.

Avocat (av'-o-ca),—a lawyer.
Badinage (bad"-e-nazh),—light or playful discourse.
Bagatelle (baga-tell'),—a trifle.
Ballet (băl-le'),—an opera dance.
Beau (bo).—a gaily-dressed person.
Beau-idéal (bo-ee-day'-al), — ideal excellence.
Beau monde (bō'-mōnd),—the fashionable world.
Bella-don'na, *It.*,—the deadly nightshade; literally *fair lady*, so called because its juice was used as a cosmetic by Italian ladies.
Belle (bell), — a fashionably-dressed lady.
Belles-lettres (bell-lettr),—literature.
Bijou (bee'-zhoo),—a jewel or trinket.
Billet-doux (bil-le-doo'),—a love-letter.
Bivouac (biv'-oo-ăck), — to pass the night under arms.
Bizarre (be-zár),—odd, fantastic.
Blanc manger (bla-mon'je),—a white jelly.
Bon jour (bohn-zhûr),—good-day.
Bon-mot (bong'-mo),—a witty saying.
Bonne-bouche (bon-boosh), — a delicious morsel; a titbit.
Bon vivant (bohn-veev'-ahn), a high liver.
Boudoir (boo-dwar'),—a lady's room.
Bougie (boó-zhe), a wax-taper.
Bouillon (bool'-yŏng), a kind of broth.
Bouquet (boo'-kay), a nosegay.
Bourgeois (boor'-zhwaw), — a burgess or citizen; citizen-like.
Bravura (bra-voo'-ra), a song of difficult execution.
Bulletin (bool'e-teen),—a short official piece of news.
Bureau (bu-ro'),—an office.
Cabriolet (cab'-re-o-lay"),—a cab.
Cachet (kah-shay),—a seal.
Caira (să-ee-ra),—(it shall go on, that is the Revolution), the refrain of a revolutionary song.
Caique (ca-eek'),—the skiff of a galley.
Calibre (ca-lee'br),—the capacity or power of the mind.
Cap-à-pie (cap-ah-pēē),—from head to foot.
Capuchin (cap-u-sheen"),—a hooded friar.
Carte blanche (cart blŏngsh),—(white paper); permission to name our own terms.
Champêtre (shau-paytr'),—rural.
Chapeau (shap'-po),—a hat.
Chaperon (shap'-er-ōng),—a gentleman who attends upon, or protects a lady in a public assembly.
Chargé d'affaires (shar'-jay-daf-fair),—a person left in charge in the absence of an ambassador.
Charivari (shar-e-va-ree'), a mock serenade of discordant music.
Charlatan (shar'-la-tan), a quack.
Château (char-to'),—a castle.
Chef-d'œuvre (shay-doover),— a masterpiece.
Chevaux de frise (shev'-o-de freeze),—a kind of spiked fence.
Ci-devant (see-de-vang), — formerly, former.
Clique (cleek),—a party or gang.
Cognac (cōne-yăck),—brandy from the town (near Bordeaux) so called.
Comme il faut (com-eel-fo'), — as it should be.
Con amōre, *It.*, —with love; with all one's heart.
Congé d'élire (con-jay-de-leer),—permission to elect.
Connoisseur (con-a-sehr,) — a skilful judge.
Contour (con-toor'),—the outline of a figure.
Corps diplomatique (core-dip-lo-ma-teek'),—the body of ambassadors.
Coup d'état (coo-deh-tah),—a sudden measure on the part of the state.
Coup de grâce (coo-de-grass'). — the finishing stroke.
Coup de main (coo-deh-mehng), — a sudden or bold enterprise.
Coup d'œil (coo-deuhl),—a glance of the eye.
Coûte que coûte (coot-ke-coot),—cost what it will.
Cuisine (kwe-zeen'),—the kitchen, the cooking department.
Cul de sac,—(literally the bottom of a sack or bag), a street close at one end.
Da capo, *It.*,—repeat from the beginning.
Débris (de-brée), — broken remains; ruins.
Déjeûner à la fourchette (de-zheu-ne-ah-lah-foor-shayt), — a breakfast with meat.
Dénouement (de-noo-mŏng'), — the winding up.

Dépôt (deh-po),—a store.
Dernier ressort (dairn-yair-ressor),—the last shift or resource.
Dieu et mon droit (dieu-ai-mon-drwau),—God and my right.
Dilettante (pl. Dilettanti),—one who *delights* in promoting the fine arts.
Dolce (dol'-che), *It.*,—sweetly and soft.
Doloro'so, *It.*,—in music, soft and pathetic.
Domicile (dom-e-seel),—an abode.
Eclaircissement (ec-lair'-cis-mong),—a clearing up or explanation of an affair.
Eclat (e-claw'),—splendour.
Elève (ai-lave),—one brought up by another; a pupil.
En passant (on pas'song),—in passing by the way.
En route (ang-root'),—on the road.
Encore (ahn-córe),—again.
Ennui (ănn-wee),—wearisomeness.
Entre nous (ong'-tr-noo), — between ourselves.
Entre (ong-tray),— entrance.
Entrepôt (ong-tr-po'),—a warehouse.
Equivoque (á-ke-voke''),—an equivocation.
Esprit de corps (es-pree-de-cōre,)—the spirit of the body or party.
Exposé (ecks-po'-zy),—an exposition, or formal statement.
Famille (fa-meel'),—family; "en famille," in the family.
Fantoccinni (fan'-to-tche''-ne), *It.*,—puppets.
Faux pas (fo pah),—a false step.
Femme couverte (fam-coo-vairt),—a married woman.
Femme sole,—a single woman.
Fête (fate),—a feast or festival.
Feu de joie (feu'-de-zhwaw),—a discharge of fire-arms.
Fiacre (fe-ah'kr),—a hackney coach.
Fille de chambre (feel-de-sham-br),—a chamber-maid.
Finale (fee-nah'-ly), *It.*,—the end; the close.
Fleur-de-lis (flehr - deh - lee), — the flower of the lily.
Fracas (fra-ca'),—a noisy quarrel.
Friseur (fre-zur'),—a hair-dresser.
Gaucherie (gōsh-re),—left-handedness; awkwardness.
Gendarmes (jang-darm),—police.
Gout (goo),—taste.
Gusto, *It.*,—the relish of anything; liking.
Harico (har'-e-co),—a kind of ragout.
Honi soit qui mal y pense (ho-ne-swaw-kee-mahl-e-pahns), — evil be to him that evil thinks.
Hors de combat (hŏr-de-cohm-bah), disabled.
Hôtel Dieu (o-tel'-dyeuh)—an hospital.
Ich dien,—I serve.
In petto,—in the breast or mind; reserve.
Inco'gnito (incog.),—in disguise, unknown.
Je ne sais quoi (je-ne-say-kwaw' — I know not what.
Jet d'eau (zhai-do'),—an ornamental water-spout.
Jeu d'esprit (zheu-des-prée),—play of wit; a witticism.
Jeu de mots (zheu-de-mo'),—play upon words.
Juste milieu (zhūst-mil-yú),—the just mean.
Levée (lev-ay),—a morning visit.
Liqueur (lee-quehr),—a cordial.
Mademoiselle (mad'-em-ma-zel''), — a young lady; miss.
Maître d'hôtel (maytr-do-tel'), — an hotel keeper or manager.
Mal à propos (mal-ap-ro-po'),—out of time; unseasonable.
Malaria, *It.*,—noxious vapours.
Mauvaise honte (mo-vais-ōnt),—false modesty.
Mêlée (may-lay),—a confused fight; a scuffle.
Ménage (men-azh),—a menagerie.
Messieurs (mess-yeu), — gentlemen; the plural of Mr.
Monsieur (mo'-syeu), — sir, Mr., a gentleman.
Naïveté (nah-eev-tay'), — ingenucusness; simplicity.
Niaiserie (nee-ais-ree),—silliness.
Nom-de-guerre (nong-de-gair'), — an assumed name.
Nonchalance (nohn-shah-lahnce), — coolness.
On dit (ohn-dée),—a flying report.
Outré (oo-tray'),—extraordinary.
Parole (par-óle),—a word of honour.
Pas (pah),—a step; precedence.
Patois (pat-waw),—provincialism.
Penchant (pan-shahn),—a leaning or inclination towards.

Protégé (protégée, fem.,) (pro-tay-jay), —one that is patronized.
Qui va là? (kee-vah-la),—who goes there?
Qui vive (kee-veev'),—who goes there? on the alert.
Ragoût (rah-góo),—a highly seasoned dish.
Rencontre (rahn'-contr), — an unexpected meeting; an encounter.
Restaurateur (re-stor-ah-teur), — a tavern-keeper.
Rouge (rooge),—red paint.
Sang froid (sahn-frwaw), — coolness; literally, cold blood.
Sans (sang), without.
Sans-culottes (sang - cu - lot'), — the rabble.
Savant (sav'-ang),—a learned man.
Sobriquet (so-bre-kay),—a nickname.
Soi-disant (swaw - dée - zang), — self-styled; pretended.
Soirée (swaw'-rā),—an evening party.
Souvenir (soov-neer'),—remembrance.
Table d'hôte (table-dōte),—an ordinary at which the master of the hotel presides.
Tête-à-tête (tait-ah-tait), — head to head; a private conversation between two persons.
Tirade (tee-rad'),—a long invective speech.
Ton (tong),—the full fashion.
Torso, *It.*,—the trunk of a statue.
Tour (toor),—a journey.
Tout ensemble (too-tahn-sahnbl), — the whole taken together.
Valet de chambre (val-e-deh-shambr), —a footman.
Vetturino (vet-too-ree'n-o), *It.*,—the owner or driver of an Italian travelling carriage.
Vis-à-vis (veez-ah-vee),—face to face; a small carriage for two persons, with seats opposite.
Vive la bagatelle (veev-la-bag-a-tel'),— success to trifles.
Vive le roi (veev-ler-waw),—long live the king.

The Moneys of Foreign Countries and their value in our own gold coin.

Country.	Chief Coins.	Value.
Austria	60 kreutzers=1 florin	$ .48½
	1 mark=100 cents	.46
Belgium	100 centimes=1 franc	.18⅗
Brazil	1000 reas=1 milrea	$ .82⅕
Bremen	5 swores=1 grote;	
	72 grotes=1 rix-dol.	.78¾
Buenos Ayres Arg. Repub.	1 dollar.....	.85
Canada	.....1 dollar.....	1.00
China	100 candarines=1 mace;	
	10 mace .....=1 tael	1.48
,,	1 dollar (varies)	1.10
Cuba	8 reals plate or 20 reals vellon = 1 dol.	1.00
Denmark	...1 Rigsbank dollar...	.55
England	12 pence=1 shilling;	
	20 shillings=1 pound	4.86⅔
Egypt	1 piastre	.05
France	5 centimes=1 sous;	
	20 sous =1 franc	.18⅗
Germany (North):		
	12 pfennings=1 groschen;	
	30 groschens=1 thaler	.69
Germany (South):		
	1 florin=60 kreutzers	.40
New Currency	1 mark=100 pfngs.	.24
Greece	100 leptos=1 drachma	.17¼
Hamburg	12 pfennings=1 schilling;	
	16 sch.=1 mark banco	.34
	1 mark current.	.29
Holland	100 cents = 1 guilder or 1 florin.....	.40
India (British):	12 pice=1 anna;	
	16 annas=1 rupee	.44½
Italy	100 centisimi=1 lira	.18⅘
Japan	1 ichibu	.35
Java	1 florin	.40
Mexico, Chili, and Peru:		
	8 rials=1 dollar	1.00
Monte Video	100 centesimas=1 rial;	
	8 rials=1 dollar	.83 3/10
Naples	10 grani =1 carlino;	
	10 carlini=1 ducat	.80
Norway	16 skillings=1 mark;	
	6 marks=1 rix dollar	1.05
Persia	1 Tomaun	2.50
Portugal	1000 reas=1 milrei	1.12
Russia	100 kopecks=1 rouble	.75
Sicily	20 grani=1 taro;	
	30 tari =1 oz.	2.40
Spain	30 maravedis=1 real vellon	.05
	68 maravedis=1 real plate	.10
	1 escudo =	.48
	20 reals =1 dollar	1.00
New Cur.	100 cents.=1 Peseta	.19
Sweden	12 rundstycks=16 skillings;	
	48 s.=1 rix-dollar specie	1.06
Switzerland	1 franc=100 cents.	.18⅗

Country.	Chief Coins.	Value.
Turkey	100 aspers=1 piastre	.05
Uruguay	1 dollar	.85
West Indies (British)	1 dollar	1.00

The *principal foreign gold coins* are the English sovereign ($4.86\frac{2}{3}$); the French twenty-franc piece, formerly known as Napoleons ($3.75); Friedrich d'or ($4.10); Louis d'or ($4.05); ducat, Austrian and Dutch ($2.25); half-imperial, Russia ($4.06); German ten-florin piece ($4.12); German gold crown ($6.75); Isabella ($5.00).

The currency of Italy, Austria, and Russia being like our own in paper money, the rates for coins fluctuate daily, according as the premium on gold and silver rises and falls.

The currency in Russia represented by rouble notes has, of late years, much depreciated, the paper rouble being worth only about 62 cents.

As all the foregoing values of the currencies of various countries are given in our own gold, the premium on gold in this country must be added thereto in order to know their values in our paper currency.

The sovereign of England contains 113 grains of pure gold; the new doubloon of Spain and our own half eagle, 160 grains each; the gold lion of the Netherlands and the double ounce of Sicily, 117 grains each; and the twenty-franc piece of France, 112 grains.

Thermometers of Europe.

Réaumur's thermometer is generally used on the Continent of Europe. To convert degrees of Réaumur into Fahrenheit, above freezing-point, multiply by $2\frac{1}{4}$ and add 32; below, multiply by $2\frac{1}{4}$ and subtract from 32; thus:

17 R × $2\frac{1}{4}$=$38\frac{1}{4}$; add 32=$70\frac{1}{4}$ F. heat.

8 R × $2\frac{1}{4}$=18; sub. 18 fr. 32=14 F. cold;

and to convert degrees of Celsius or Centigrade into those of Fahrenheit, multiply by $1\frac{4}{5}$, and add 32 if above freezing-point, and subtract if below freezing-point.

The table annexed will enable the inquirer to see at a glance the difference between the degrees of Réaumur and Celsius with those of Fahrenheit.

Réaumur.	Centigrade.	Fahrenheit.
Boiling Points.		
80	100	212
76	95	203
72	90	194
68	85	185
64	80	176
60	75	167
56	70	158
52	65	149
48	60	140
44	55	131
40	50	122
36	45	113
32	40	104
28	35	95
24	30	86
20	25	77
Boiling Points—*con.*		
16	20	68
12	15	59
8	10	50
4	5	41
0	0	32
Freezing Points.		
—4	—5	23
—8	—10	14
—12	—15	5
—16	—20	—4
—20	—25	—13
—24	—30	—22
—28	—35	—31
—32	—40	—40
—36	—45	—49

Weights and Measures.

Below are given the common measures of weight, length, &c. as used in this country.

Avoirdupois Weight.—This weight is used in nearly all commercial transactions, and all common dealings:

$27\frac{1}{3}$ Grains	=1	Drachm	... $27\frac{1}{3}$ grs.
16 Drachms	=1	Ounce (oz.)	...$437\frac{1}{2}$,,
16 Ounces	=1	Pound (lb.)	...7000 ,,
8 Pounds	=1	Stone of Butchers' Meat.	
14 Pounds	=1	Ordinary Stone.	
28 Pounds	=1	Quarter (qr.)	
4 Quarters	=1	Hundredweight (cwt)	
20 Cwt.	=1	Ton.	

Hay and Straw Weight.

36 lbs. Avoirdupois of Straw	=1	Truss.
56 lbs. ,, Old Hay	=1	,,
60 lbs. ,, New Hay	=1	,,
36 Trusses	=1	Load.

A load of old hay should weigh 18 cwt., and a load of new hay 19 cwt. 32 lbs. A load of straw weighs 11 cwt. 64 lbs.

Wool Weight.

			cwt.	qr.	lb.
7 Pounds	=1	Clove ...	0	0	7
2 Cloves	=1	Stone ...	0	0	14
2 Stones	=1	Tod	0	1	0
$6\frac{1}{2}$ Tods	=1	Wey ...	1	2	14
12 Sacks	=1	Last	39	0	0

A "Pack" of Wool is 240 pou ds.

Silk is frequently weighed by the "great pound" of 24 ounces.

Old Apothecaries' Weight.—

20 Grains	= 1 Scruple	℈	= 20 grs.
3 Scruples	= 1 Drachm	ʒ	= 60 ,,
8 Drachms	= 1 Ounce	℥	= 480 ,,
12 Ounces	= 1 Pound	lb	5760 ,,

Apothecaries compound by this weight, but buy and sell their drugs by avoirdupois.

New Apothecaries Weight (England).

Ounce ...	= 437½ grains.
Pound, 16 oz. ...	= 7000 ,,
(Same as avoidupois.)	

Troy Weight.—

3⅛ Grains	...	= 1 Carat.
24 Grains	...	= 1 Penny weight.
20 Pennyweights		= 1 Ounce 480 grs.
12 Ounces	...	= 1 Pound 5760 ,,

Fluid Measure.—

		Marked.
60 Mimims	= 1 Fluid Drachm	f
8 Drachms	= 1 Ounce ...	f
16 Ounces	= 1 Pint ...	O
8 Pints	= 1 Gallon ...	gal.

Particular Weights.—

A Firkin of Butter	= 56 lbs.
A Firkin of Soap	= 64 ,,
A Barrel of Raisins	= 112 ,,
A Barrel of Soap	= 256 ,,
A Fodder of Lead,	
,, London and Hull	19½ cwt.
,, Derby	22½ ,,
,, Newcastle	21½ ,,

Dry or Corn Measure.—

4 Quarts	...	= 1 Gallon.
2 Gallons	...	= 1 Peck.
4 Pecks	...	= 1 Bushel.
3 Bushels	...	= 1 Sack.
12 Sacks	...	= 1 Chaldron.
8 Bushels	...	= 1 Quarter.
5 Quarters	...	= 1 Load.

Liquid Measure.—

4 Gills	...	= 1 Pint.
2 Pints	...	= 1 Quart.
4 Quarts	...	= 1 Gallon.

These are all the practical liquid measures, but there are many other "names,"—if, however, the packages contain more or less than the proper number of gallons, the difference is charged or allowed for by the seller, as the case may be. Therefore in all purchases of wine, beer, &c., the buyer should see he gets his proper quantity *in gallons*, irrespective of any nominal larger measures. *Ale or Beer.*—9 gallons = 1 firkin; 18 gallons = 1 kilderkin; 36 gallons = 1 barrel; 54 gallons = 1 hogshead; 108 gallons = 1 butt. *Wine.* Six "reputed" quarts, or twelve "reputed" pints = 1 gallon; 13½ gallons of sherry or 14 gallons of port = 1 octave; 27 gallons of sherry, 28½ gallons of port, or 23 gallons of Marsala or Madeira = 1 quarter-cask; 54 gallons of sherry, 57½ gallons of Port, or 46 gallons of Marsala or Madeira = 1 hogshead; 108 gallons of sherry = 1 butt; 115 gallons of port = 1 pipe; 93 gallons of Marsala = 1 pipe; 92 gallons of Madeira = 1 pipe. Spanish Red Wine is sold by the same measures as port. A puncheon of rum is sold at so much per gallon, and the same of every description of spirits. All bottled wine or spirits is sold at so much per dozen "reputed" quarts, (or per two dozen "reputed" pints) which is exactly two gallons.

Measures of Length.—

12 Inches	= 1 Foot.
3 Feet	= 1 Yard.
5½ Yards	= 1 Rod, pole or perch.
4 Poles	= 1 Chain.
10 Chains	= 1 Furlong.
8 Furlongs	= 1 Mile (1,760 Yards.)

Particular Measures of Length.—

12 Lines 1 Inch.
3 Barleycorns 1 Inch.
3 Inches 1 Palm.
4 Inches 1 Hand.
9 Inches 1 Span.
A Cubit 18 Inches.
A Pace, Military, 2 Feet 6 Inches.
A Pace, Geometrical, 5 Feet.
A Fathom, 6 Feet.
A Cable's Length, 240 Yards.
A Degree 69⅛ Miles, or 60 Nautical M.
A League 3 Miles.

Cloth Measure.—This measure is used for all kinds of cloth, muslin, ribbon, &c. The yard in cloth measure is the same as in long measure, but differs in its divisions and subdivisions.

2¼ Inches	= 1 Nail.
4 Nails	= 1 Quarter.
4 Quarters	= 1 Yard.
3 Quarters	= 1 Flemish Ell.
5 Quarters	= 1 English Ell.
6 Quarters	= 1 French Ell.

Square or Surface Measure.—

144	square inches	= 1	square foot.
9	,, feet	= 1	,, yard
30¼	square yards	= 1	square rod, pole or perch.
16	,, poles	= 1	square chain.
2½	,, chains	= 1	,, rood.
4	,, roods	= 1	,, acre.
640	,, acres	= 1	,, mile.

A square mile thus contains 640 acres, 2,560 roods, 6,400 chains, 102,400 rods, poles or perches, or 3,097,000 square yards. A "yard of land" is 30 square acres, a "hide of land" 100 square acres, and 40 "hides" one "barony."

Cubic or Solid Measure.—

1728 cubic inches	= 1 cubic foot.
27 cubic feet	= 1 cubic yard.
40 do. rough or 50 do. of hewn timber	= 1 ton or load.
42 cubic ft. timber	= 1 shipping ton.
108 cubic feet	= 1 stack of wood
128 cubic feet	= 1 cord of wood
40 cubic feet	= 1 ton shipping.

Measure of Time.—

60 seconds	= 1 minute.
60 minutes	= 1 hour.
24 hours	= 1 day.
7 days	= 1 week.
28 days or 4 weeks	1 lunar month.
28, 29, 30, 31 days	1 calendar month.
12 calendar mths.	1 year.
365 days	= 1 common year.
366 days	= 1 leap year.

Angular Measure.—

60 Seconds	= 1 Minute.
60 Minutes	= 1 Degree.
30 Minutes	= 1 Sign.
90 Degrees	= 1 Quadrant.
4 Quadrnts, 360°	= 1 Circumference of the Globe or Great Circle.

[The above are the absolute divisions or measurements by which latitude and longitude are expressed.]

The Sizes of Paper.

24 Sheets of paper.	1 Quire.
20 Sheets . .	1 Quire outsides.
25 Sheets . .	1 Printer's quire.
20 Quires . .	1 Ream.
21½ Quires .	1 Printer's or perfect ream.

Writing and Drawing Papers.—(*Whatman's sizes.*)—

	Inches.	Weight. Ream.
Copy . .	20 by 16	17 lbs.
Pott . .	15 ,, 12½	10 ,,
Foolscap .	17 ,, 13½	15 ,,
Post . .	19 ,, 15¼	20 ,,
Large Post .	20¾ ,, 16¾	23 ,,
Demy . .	20 ,, 15½	25 ,,
Medium .	22 ,, 17½	34 ,,
Royal . .	24 ,, 19	44 ,,
Super Royal .	27 ,, 19	54 ,,
Elephant .	28 ,, 23	72 ,,
Imperial .	30 ,, 22	72 ,,
Columbier .	34½ ,, 23½	102 ,,
Atlas . .	34 ,, 26	98 ,,
Double Elephant	40 ,, 26¾	130 ,,
Antiquarian .	53 ,, 31	250 ,,
Emperor .	72 ,, 48	620 ,,

Printing Papers.—	Inches.
Post . .	19¼ by 15½
Medium . .	20 ,, 19
Demy . .	22½ ,, 17½
Royal . .	25 ,, 19¼
Super Royal .	27½ ,, 20½
Imperial . .	30 ,, 22½
Double Foolscap .	27 ,, 17
Double Crown .	30 ,, 20
Sheet and half Post	23½ ,, 19½
Double Post .	31½ ,, 19½
Double Demy .	35 ,, 22½

Sugar Papers, &c.—	Inches.
Double Two Pound	24 by 16
Large ditto .	27 ,, 17
Double Small Hand	30 ,, 19
Royal Hand .	25 ,, 20
Lumber Hand .	23½ ,, 18
Middle Hand .	22½ ,, 16
Purple Copy Loaf	22½ ,, 16½
Ditto Double ditto	23 ,, 16½
Ditto Powder ditto	26 ,, 18½
Ditto Single ditto	28 ,, 22
Ditto Elephant .	29 ,, 24
Purple Lump Loaf	33 ,, 23
Ditto Titler .	35 ,, 20

Brown Papers.—	Inches.
Kent Cap .	21 by 18½
Bag Cap .	24 ,, 19
Haven Cap . .	23 ,, 21
Imperial Cap .	29 ,, 22
Double Four Pound	31 ,, 21
Elephant . .	34 ,, 24
Double Imperial .	44 ,, 29
Casing . .	46 ,, 36

Cartridge Papers.	Inches.
Copy	20 by 16¼
Demy	22½ ,, 17½
Royal	25 ,, 20
Cartridge	26 ,, 21
Elephant	28 ,, 23
Double Crown	30 ,, 20
Imperial	30 ,, 22
Double Demy	35½ ,, 22½

Glazed Pressing Boards.	Inches.
Foolscap	17½ by 13½
Demy	22 ,, 18
Royal	24 ,, 19
Royal Extra	25½ ,, 20
Double Foolscap	29 ,, 18
Super Royal	29 ,, 21½
Imperial	31 ,, 23
Large Size for Dyers	36 ,, 24

Sizes of Milled Boards.

	Mark.	Inches.
Pott	P	17¼ by 14¼
Foolscap	FC	18½ ,, 14½
Crown	C	20 ,, 16¼
Small Half Royal	SHR	20¼ ,, 13
Large Half Royal	LHR	21 ,, 14
Short	S	21 ,, 17
Half Imperial	HI	23½ ,, 16½
Small Half ditto	SHI	24¼ ,, 15½
Middle or Small Demy	M	22½ ,, 18½
Lrg. Mid. or Lrg. Demy	LM	23¾ ,, 18½
Large or Demy	L	24 ,, 19
Small Whole Royal	SR	25½ ,, 19½
Large Whole Royal	LR	26¾ ,, 20¾
Whole Imperial	I	32 ,, 22½
Long Thin	LT	30 ,, 21
Atlas	A	30 ,, 26
Long Royal	LR	34 ,, 21
Colombier	Col	36 ,, 24
Portfolio	PF	34 ,, 27
Gt. Eagle or Dbl. Elephant	GE	40 ,, 28
Emperor	E	44 ,, 30
Double Royal	DR	46 ,, 21
Long Colombier	LC	49 ,, 54
Long Dbl. Elephant	LDE	50 ,, 27½
Antiquarian	ANT	54 ,, 30½
Ex. Antiquarian	Ex. ANT	54 ,, 34½

A roll of parchment, 60 skins.

90 words in Chancery, 80 in Exchequer, and 71 in common law, are 1 folio.

A bag of Hamburg rags weighs 2½ cwt.

A bale of Mediterranean rags weighs 4¼ to 5 cwt.

Quills are sold by weight, called loths—a loth is about half an ounce.

The Sizes of Books.

	Pages.	Leaves.	Sheet.
Folio Books	4 or	2 make	1
Quarto, or 4to	8 ,,	4 ,,	1
Octavo, or 8vo.	16 ,,	8 ,,	1
Duodecimo, or 12mo.	24 ,,	12 ,,	1
Octodecimo, or 18mo.	36 ,,	18 ,,	1

24mo., 32mo., 48mo., 64mo., 72mo., &c., &c. In these sizes the sheet is folded in duplicate 8vos. or duodecimos.

To Weigh a Haystack.—Measure the length and breadth of the stack; take height from the ground to the eaves; add to this last one half of the height from the eaves to the top; multiply length by breadth, and the product by the height, all expressed in feet; divide the amount by 27, to find the cubic yards, which multiply by the number of tones supposed to be in a cubic yard (viz., in a stack of new hay, 6 stones of 22 lbs. avoir. each; if the stack has stood some time, 8 stones; and if old hay, 9 stones), and you have the weight in stones.

To Find the Contents of a Barrel.—In cases where the centre or bung diameter is larger than the ends.—First square the centre diameter in inches, and then multiply it by 2, to which add the square of the diameter of the end; then multiply this by the length of the cask, and divide by 1,077. Thus a barrel with a centre diameter of 28 inches, end 25 inches, and length 36in ches; $28 \times 28 \times 2 = 1{,}568 + 625\ (25 \times 25) = 2{,}193 \times 36 = 78{,}948 \div 1{,}077 = 73$ old measure $= 74\frac{1}{4}$ Imperial gallons. If the diameter is equal everywhere, multiply the square of the diameter in inches by the depth, and divide the product by 359. Thus a barrel with a diameter of 36 inches, and 50 inches deep: $36 \times 36 \times 50 = 64{,}800 \div 359 = 180\frac{1}{2}$ old measure $= 183\frac{1}{2}$ Imperial gallons.

To Prevent an Open Boat Sinking.—Divide off a small portion of the boat at the bow, and close it tight with marine glue, and do the same at the stern.

To Measure Timber.—To ascertain the contents of *unsquared* timber, multiply the square of the quarter girth, or of quarter of the mean circumference, by the length. When the buyer is not allowed his choice of girth in taper trees, he may take the mean dimensions, either by girthing it in the middle for the mean girth, or by girthing it at the two ends, and taking half of their sum. If not, girth the tree in so many places as is thought necessary, then the sum of the several girths divided by their number, will give a mean circumference, the fourth part of which being squared, and multiplied by the length, will give the solid contents. The superficial feet in a board or plank is known by multiplying the length by the breadth. If the board be tapering, add the breadth of the two ends together, and take half their sum for the mean breadth, with which multiply the length.

The solid contents of *squared timber* are found by measuring the mean breadth by the mean thickness, and the product again by the length. Or multiply the square of what is called the quarter girth, in inches by the length in feet, and divide by 144, and you have the contents in feet.

Boughs, the quarter girth of which is less than 6 inches, and parts of the trunk less than 2 feet in circumference, are not reckoned as timber.

One and-a-half inch in every foot of quarter girth, or one-eighth of the girth is allowed for bark, except of elm. One inch in the circumference of the tree, or whole girth, or one-twelfth of the quarter girth, is the general fair average allowance. The quarter girth is half the sum of the breadth and depth in the middle.

The nearest approach to truth in the measuring of timber is to multiply the square of one-fifth of the girth, or circumference, by double the length, and the product will be the contents.

To Measure Brickwork. — Multiply the length in feet of the wall by the height, and divide the product, if one brick thick, by 408; one and a half by 272; two by 204; two and a half by 163; three by 136; three and a half by 116; and if four by 102. Thus a wall 76 ft. long, 9 high, and $1\frac{1}{2}$ brick thick; $76 \times 9 = 684 \div 272 = 2\frac{1}{2}$ rods.

To Ascertain the Weight of Cattle.—Measure the girt close behind the shoulder, and the length from the fore-part of the shoulder-blade along the back to the bone at the tail, which is in a vertical line with the buttock, both in feet. Multiply the square of the girt, expressed in feet, by five times the length, and divide the product by 21; the quotient is the weight, nearly, of the four quarters, in imperial stones of 14 lbs avoirdupois. For example, if the girt be $6\frac{1}{2}$ ft., and the length $5\frac{1}{4}$ft., we shall have $6\frac{1}{2} \times 6\frac{1}{2} = 42\frac{1}{4}$, and $5\frac{1}{4} \times 5 = 26\frac{1}{4}$; then $42\frac{1}{4} \times 26\frac{1}{4} = 1109\frac{1}{16}$, and this, divided by 21, gives $52\frac{5}{7}$ stones nearly or 52 stones 11 lbs. In very fat cattle, the four quarters will be about one-twentieth more, while in very lean they will be one-twentieth less than the weight obtained by the rule. The four quarters are little more than half the weight of the living animal; the skin weighing about the eighteenth part, and the tallow usually about the twelfth part of the whole.

The Days of the Year. — The following table gives the position in the 365 days, of each day in the year: —For example, to find what day of the year the 17th of October is—look in the first column for the nearest day of the month to the 17th, (which is in this case the 15th); you will find the 15th is the 288th, and so the 17th of October is the 290th day of the year.

Day of Mth.	Jan.	Feb.	Mar.	April.	May.	June.
1st	1	32	60	91	121	152
8th	8	39	67	98	128	159
15th	15	46	74	105	135	166
22nd	22	53	81	112	142	173
29th	29		88	119	149	180

Day of Mth.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1st	182	213	244	274	305	335
8th	189	220	251	281	312	342
15th	196	227	258	288	319	349
22nd	203	234	265	295	326	356
29th	210	241	272	302	333	363

Table of European Weights.

France, Belgium, Italy, Spain, Portugal	1 Kilogramme=2⅕ lbs. 10 Kilogrammes=22 lbs.
Holland	1 Pond=2⅕ lbs. 10 Ponds=22 lbs.
Prussia, Saxony, Denmark, Norway, Switzerl.	1 Pund=1⅕ lbs. 10 Punds=12 lbs.
Sweden	1 Skälpund=15 ounces. 100 Skälpunds=93 lbs.
Wurtemburg	1 Pfund=1·03 lbs. 100 Pfunds=103 lbs.
Russia	1 Punt=14½ ounces. 100 Punts=90⅕ lbs.
Austria	1 Pfund=1¼ lbs. 100 Pfunds=123½ lbs.
Turkey	1 Oke=2⅘ lbs. 1 Rottolo=1¼ lbs. 100 Okes=283½ lbs. 100 Rottolos=125 lbs.

Measures of Distances on the various European Railways.

French, Belgian, Italian, Spanish, Portug.	1 Kilomètre=1093·633yds, or nearly 5 furlongs. 1 Eng. mile=1·6093 kilo.
Holland	1 Mijl=1093·633 yards. 1 Eng. mile=1·6093 Mijl.
Denmark	1 D. m.=abt. 4·136 E. m. 1 E. m.=less than ¼ D. m.
Norway	1 Nor. m.=7·021 Eng. m. 1 Eng. m.=abt. ⅐ Nor. m.
Swedish	1 Swed. m.=6·641 Eng. m. 1 E. m.=less than ⅙ S. m.
Prussian	1 Prus. m.=4·681 Eng. m. 1 Eng. m.=abt. ⅕ Prus. m.
Saxon	1 Saxon m.=4·66 Eng. m. 1 Eng. m.=abt. ⅕ Sax. m.
Wurtemburg	1 Wurt. m.=4·628 E. m. 1 E. m.=abt. ⅕ Wurt. m.
Austrian	1 Aust. m.=4¾ Eng. m. 1 Eng. m.=abt. ⅕ Aus. m.
Switzerl.	1 Schweizerstunde=2·982. 1 E. m.=over ⅓ Schw.
Russian	1 Verst=5⅓ Eng. furlongs. 1 E. m.=over 1½ Versts.
Turkish	1 Berri=1·038 Eng. m. About 25 E. m.=24 Berri.

Measures of Length in Europe.

France, Belgium, Italy, Netherlands, Switzerland, Greece	1 Mètre=39 $\frac{37}{100}$ in. or 10 Decimètres, or 100 Centimètres, or 1000 Millimètres.
Prussia, Saxony, Hanover, Bavaria, Wurtemb'rg and Minor States of N. German Confed.	1 Stab=1 Mètre.
Austria	1 Imperial Ell=30 $\frac{6}{10}$ in. 1 Fuss=$\frac{98}{100}$ of a foot.

Distances.

	Miles.
Liverpool to New York	3033
Queenstown ,, ...	2793
Southampton ,, ...	3100
Plymouth ,, ...	3030
Brest ,, ...	3090
Havre ,, ...	3315
Bremen ,, ...	3525
Hamburg ,, ...	3575
"Fastnet Light" to Queenstown	60
"The Needles" to Southampton	205
Cape Race to New York	1000

Cork to London, 18 hours journey.
Dublin to London, 12 hours.
Glasgow to London (406 miles), 11 hours 45 minutes.
Edinburgh to London (401 miles), 11 hours 35 minutes.
Liverpool to London (201¼ miles), 5 hours 30 minutes.
Plymouth to London 6 hours, 15 minutes.
Southampton to London 2 hours, 36 minutes.
Brest to Paris (623 kilom. = 395 miles), 16 hours 45 minutes.
Havre to Paris (228 kilom = 144½ m.), 5 hours 15 minutes.

60 geographical miles = 1 Degree.
69⅛ statute miles = ,,
9·85 Norway miles = ,,

Squinting.—It is well known that in infancy there is not unfrequently a tendency to squint; this often passes away as the child increases in age; but it sometimes becomes quite a fixed habit, demanding the knife of the oculist for its permanent cure. A means of rendering this operation unnecessary by curing the tendency in early life, has been suggested, which is worthy of trial. A pair of spectacles is procured without any glasses in them. One of the orifices opposite the eye that squints is to be filled with thin horn or with ground glass, and in the centre of the horn or glass is to be made a small hole. It is obvious that to see with the squinting eye it is necessary for the child to look directly through the orifice in the centre. He will thus acquire the habit of looking forward towards an object instead of looking to the right or left hand of it. It is not at all improbable that the slight squint, in infancy, may be remedied by this means.

The Rind of all Fruit is Indigestible, and so is the pellicle or skin of kernels and nuts of all kinds. The edible part of fruit is particularly delicate, and liable to rapid decomposition if exposed to the atmosphere; it is therefore a provision of Nature to place a strong and impervious coating over it, as a protection against accident, and to prevent insect enemies from destroying the seed within. The skin of all the plum tribe is wonderfully strong, compared with its substance, and resists the action of water and many solvents in a remarkable manner. If not thoroughly masticated before taken into the stomach, the rind of plums is rarely, if ever, dissolved by the gastric juice. In some cases, pieces of it adhere to the coats of the stomach, causing sickness and other inconvenience. Dried raisins and currants are particularly included in these remarks, showing the best reasons for placing the fruit upon the chopping-board with the suet in making a pudding of them, for if a dried currant passes into the stomach whole, it is never disgested at all. When horses eat oats or beans that have not been through a crushing-mill, much of this food is swallowed whole, and in this state, being perfectly indigestible, the husk or pellicle resisting the power of the stomach, there is so much loss to nutrition. Birds, being destitute of teeth, are provided with the apparatus for grinding their seed, namely with the gizzard, though which the seed passes, and is crushed prior to digestion. The peels of apples and pears should always be cast away. Oranges we need not mention, as this is always done. Orleans, greengages, damsons, and all other plums, should be carefully skinned if eaten raw; and if put into tarts, they should be crushed before cooking. Nuts are as indigestible as we could desire, if the brown skin be not removed or blanched, as almonds are generally treated.

Sleep at Will.—On every hand we hear complaints such as "I lay awake for hours," &c., &c., and any means natural or artificial—of procuring sleep—in other words, falling to sleep at will—is certainly worth a trial. Dr. Binn, the author of the "Anatomy of Sleep," thus describes his process:—"I turn my eyeballs as far to the right or left, or upwards or downwards, as I can without pain, then commence rolling them slowly with that divergence from a direct line of vision around in their sockets, and continue doing this till I fall asleep, which occurs generally within three minutes, and always within five at most. The immediate effect of this procedure differs from that of any other of which I have heard to procure sleep. It not merely diverts thought into a new channel, but actually suspends it. I have endeavoured innumerable times, while thus rolling my eyes, to think upon a particular subject, and even upon that which before kept me awake, but I could not. As long as they were moving around, my mind was a blank. If any one doubts this, let him try the experiment for himself. Let him pause just here and make it. I venture to assure him that if he makes it in good faith, in the manner described, the promise of 'a penny for his thoughts,' or for each of

them, while the operation is in progress, will add very little to his wealth."

The Human Body.—Pope truly said "the proper study of mankind is man;" but just as marvels by familiarity cease to seem marvellous, so by its being constantly before our eyes, we overlook that wonder of wonders, the human body. In the human skeleton, about the time of maturity, there are 165 bones. The muscles are about 500 in number. The length of the alimentary canal is about 32 ft. The amount of blood in an adult averages 30 pounds, or full one-fifth of the entire weight. The heart is 6 in. in length, and 4 in. in diameter, and beats 70 times per minute, 4,200 times per hour, 100,800 per day, 36,772,000 per year, 2,565,440,000 in three score and ten, and at each beat 2½ ounces of blood are thrown out of it, 175 ounces per minute, 656 pounds per hour, 7 and 3-4ths tons per day. All the blood in the body passes through the heart in 3 minutes. This little organ, by its ceaseless industry during life, lifts the enormous weight of 370,700,200 tons. The lungs will contain about 1 gallon of air at their usual degree of inflation. We breathe on an average 1,200 times per hour, inhale 600 gallons of air, or 24,000 gallons per day. The aggregate surface of the air cells of the lungs exceeds 20,000 square inches, an area very nearly equal to the floor of a room 12 ft. square The average weight of the brain of an adult male is 3 pounds and 8 ounces, of a female 2 pounds and 4 ounces. The nerves are all connected with it, directly or by the spinal marrow. These nerves, together with their branches and minute ramifications, probably exceed 10,000,000 in number, forming a "body guard" outnumbering by far the greatest army ever marshalled! The average area of the skin in an adult is estimated to be 2,000 square inches. The atmospheric pressure being about 15lbs to the square inch, a person of medium size is subjected to a pressure of 40,000 lbs.! Each square inch of skin contains 3,500 sweating tubes, or perspiratory pores, each of which may be likened to a little drain-tile 1-4th of an inch long, make an aggregate length of the entire surface of the body of 201, 166 ft., or a tile-ditch for draining the body almost 40 miles long!

The Teeth of Man and of Inferior Animals.—Vegetarians will do well to study the teeth of man, and they will find there the distinct refutation of their arguments. No naturalist who has examined the teeth of man, and compared their structure with those of the lower animals, but must be of the opinion that those who restrict themselves to a vegetable diet, are not acting in accordance with the dictates of nature. The teeth of man, partaking as they do, in a nearly equal degree, of the properties of the herbivorous and carnivorous animals, show that he has been destined to be nourished by both descriptions of food. We do not require to refer to what would be sufficient evidence of the propriety of using this kind of ailment, viz., the natural instinct of man to seek it, or to the superiority in energy and stamina seen in those races of mankind who freely use it, compared with those who, from circumstances or superstitious observance, do not partake of animal food. The form and structure of the teeth alone afford the most conclusive proof that man was intended to derive his food in nearly equal degrees from the animal and vegetable kingdoms. They will best preserve their constitutions in unimpaired vigour, therefore, who do not confine themselves exclusively to the use of either.

Yearly Food of One Man.—From the army and navy diet scales, based upon the recognised necessities of large numbers of men in active life, it is inferred that about two and one-fourth pounds avoirdupois of dry food, per day, are required for each individual; of this about three-fourths are vegetable, and the rest animal. At the close of an entire year, the amount is upwards of eight hundred pounds. Enumerating under the title of water all the various drinks, its estimated quantity is about fifteen hundred

pounds per annum. The air received by breathing may be taken at eight hundred pounds. With these figures before us, we are able to see how the case stands. The food, water, and air which a man receives, amount, in the aggregate, to more than three thousand pounds a year — about a ton and a half, or twenty times his weight. This fact shows the gigantic expenditure of material required for life, and proves better than words the changes which are hourly caused by every living being.

Age of Animals.—A bear rarely exceeds 20 years; a dog lives 20 years; a wolf 20 years; a fox 14 or 16 years; lions are longlived. Pompey lived to the age of 70. The average of cats is 15 years; a squirrel and hare 7 or 8 years; rabbits 7. Elephants have been known to live to the great age of 400 years. When Alexander the Great had conquered one Phorus, King of India, he took a great elephant which had fought very valiantly for the king, named him Ajax, and dedicated him to the sun, and let him go with this inscription—"Alexander, the son of Jupiter, hath dedicated Ajax to the sun." This elephant was found with this inscription 350 years after. Pigs have been known to live to the age of thirty years; the rhinoceros to 20. A horse has been known to live to the age of 62, but averages 25 to 30. Camels sometimes live to the age of 100. Stags are longlived. Sheep seldom exceed the age of 10. Cows live about 15 years. Cuvier considers it probable that whales sometimes live to the age of 1,000. The dolphin and porpoise attain the age of 30. An eagle died in Vienna at the age of 104 years. Ravens frequently reach the age of 100. Swans have been known to live 360 years. Pelicans are longlived. A tortoise has been known to live to the age of 107.

Pulse of Animals.—Amateur veterinarians will be assisted by the following table of the number of pulsations in a minute in various animals:—The horse, 32 to 38 (36 to 40 White); ox or cow, 35 to 42 (42 to 45 Clater); ass, 48 to 54; sheep, 70 to 79; goat, 72 to 76; dog, 90 to 100; cat, 110 to 120; rabbit, 120; guinea-pig, 140; duck, 136; hen, 140; heron, 200.

Rapid Flight of Birds.—A vulture can fly at the rate of 150 miles an hour. Observations made on the coast of Labrador convinced Major Cartwright that wild geese could travel at the rate of 90 miles an hour. The common crow can fly 25 miles; and swallows, according to Spallanzi, 92 miles an hour. It is said that a falcon was discovered at Malta 24 hours after the departure of Henry IV. from Fontainebleau. If true, this bird must have flown for 24 hours at the rate of 57 miles an hour, not allowing him to rest a moment during the whole time.

How to Keep Houses Cool in Hot Weather.—Professor Attfield, writing on this subject, says:—"The secret consists, not in letting in cool air, for naturally all do that whenever they have the chance, but in keeping out hot air. If the air outside a room or house be cooler than the air inside, let it in by all means; but if it be hotter, carefully keep it out. A staircase-window left open during the night will often cool the passages of a house, and the rooms, too, if their doors be not shut; but it must be closed at eight or nine o'clock in the morning, or, if on the sunny side, at four or five o'clock, and the blind drawn down. The mistake people generally make is to throw open their windows at all hours of the day, no matter whether the atmosphere outside be cool or scorching. 'Let us have some air,' they say, and in comes the treacherous breeze—for even hot air is pleasant while it is gently blowing, taking away perspiration, and thereby cooling the skin; but the apartment is made warmer, instead of cooler, and as soon as they move out of the draught, they find their room to be more uncomfortable than before. Let in cool air, keep out hot; that is the only formula to insure the minimum of discomfort. Sitting-rooms may generally be kept cool during the whole day, if the doors be only opened for ingress, and egress,

and the windows be kept closed and shielded from direct sunshine by a blind. If the atmosphere of a room be impure from any cause, let it be renewed; hot air is less injurious than bad air; if a room be small in comparison with the number of persons engaged in it, free ventilation becomes indispensable. In a cooking apartment the temperature will probably be higher than outside, hence the free admission even of hot air will be desirable. If persons do not object to sit in a direct draught of air, windows and doors may be opened, a breeze being more refreshing, even though several degrees warmer, than still air; but under nearly all other circumstances rooms should be kept closed as much as possible till after sundown, or till the air outside is cooler than that inside. Let in cool air, keep out hot."

Open Windows at Night.—The above theory of letting in cool air must of course be adopted with caution. If you *sleep* uncomfortably cool you will get ill. To put the window of a bedroom quite high, when the thermometer is at zero is an absurdity. The cooler a sleeping apartment is—below a certain temperature—the more unhealthy does it become, because cold condenses the carbolic acid formed by the breathing of the sleeper. It settles near the door and is re-breathed, and if in a very condensed form he will die before the morning. Hence, we must be governed by circumstances; the first thing is, you must be comfortably warm during sleep, otherwise you are not refreshed, and inflammation of the lungs may be engendered, and life destroyed within a few days. An open fire-place is sufficient for ordinary purposes in cold weather. When the windows are opened, it is well to have them down at the top two or three inches, and up at the bottom.

Caution to Persons Living in Marshy Districts. — In miasmatic localities — and these are by rivers, ponds, marshes, fens, and the like — it is most important, from the first of August until several severe frosts have been noticed, to sleep with all the windows closed, because the cool air of sunset causes the condensation of the poisonous emanations which were caused by the heat of the noonday sun to rise far above the earth; this condensation makes the air "heavy" at sunset, made heavy by the greater solidification of the emanations by cold; and resting on the surface of the earth in their more concentrated and malignant form, they are breathed into the lungs, and swallowed into the stomach, corrupting and poisoning the blood with great rapidity. By daylight these condensations are made so compact by the protracted coolness of the night, that they are too near the surface of the earth to be breathed into the system; but as the sun begins to ascend, these heavy condensations, miasms, begin to rise again to the height of several feet above the ground, and are freely taken into the system by every breath and swallow. Hence the hours of sunrise and sunset are the most unhealthful of all the hours of the twenty-four in the localities named; and noontide, when the sun is the hottest, is the most healthy portion of the day, because the miasm is so much rarefied that it ascends rapidly.

Beds and their Management. The notion that feather beds are unhealthy and mattresses healthy, is erronous. A feather bed is only unhealthy when the sleeper finds himself too warm in it. During the cold winter months the warmth of feathers is almost necessary. A feather bed is a greater luxury than a mattress. Nothing is more uncomfortable to lie upon than an ill-kept feather bed. A bed should be well shaken by the four corners alternately, and the two sides of the centre; shake it again and again. Turn it, and repeat the process. Then feel for any knots of feathers, and separate them with the hands. On rising, strip the bed. Do not lay the clothes back over the footboard, but remove them on one or two chairs. Shake the bolsters and billows. Some make up beds immediately they are vacated. To do so is not healthy. They need to air

for a couple of hours. Open the windows, and set open the door also. Unless there is a thorough draught, there is no true ventilation of a sleeping-room.

Carbolic Acid v. Chloride of Lime.—A recent report upon the relative value of chloride of lime and carbolic acid as disinfectants, deserves serious attention. Some meat was hung up in the air till the odour of putrefaction was strong. It was then divided into two pieces. One was soaked for half an hour in chloride of lime solution, and was then washed and hung up again; the offensive smell had entirely gone. The other piece of meat was soaked in a solution of carbolic acid, containing one per cent. of the acid; it was then dried and hung up. The surface of the meat was whitened, but its offensive odour was not removed, though it was masked by the carbolic acid. In two days' time the bad odour had entirely gone, and was replaced by a pure but faint smell of carbolic acid. In a few weeks' time the pieces of meat were examined again. The one which had been deodorized with chloride of lime now smelt as offensively as it did at first, whilst the piece treated with carbolic acid had simply dried up, and had no offensive odour whatever. Even after a month's exposure no change had taken place. This shows us that whilst chloride of lime merely removes the smell of decomposing matter—in fact, is a deodoriser—carbolic acid actually prevents decomposition, and is antiseptic.

Sugar as Food.—Next to corn and animal food, sugar constitutes a most important part of the food of the people. Although, being a non-nitrogenous substance, sugar cannot make flesh, yet it makes fat; it aids respiration, conduces to the digestion of flesh-making things, and in several other ways exalts the power of that mysterious energy which we agree to call "life." The poor are greater consumers of sugar than the rich, and the Irish poor greater consumers than the English poor. The latter mostly affect the use of coarse, impure brown sugars, the former are great connoisseurs of white, refined or pure sugar.

Adulteration of Sugar.—If brown sugar be adulterated with sand, the fraud may be detected by taking a glass full of clean water, and dissolving a quantity of the suspected sugar therein. If sand, or any similar substance, be present, it will fall to the bottom when the solution has stood some time.

Draughts Prevented.—The means of preventing draughts from doors or windows simply consists of a slight beading, screwed or nailed round the door-frame, with a narrow slip, or ribbon, of vulcanised india-rubber, fixed in a groove at an angle, so as to form an elastic spring to press against the door when closed, and thus to make the joints air-tight all round The beading at the foot of the door is so hinged and affixed to the door itself, as to open much like one of the pieces of a parallel ruler, only protected between the two slips, and having a spring between its two pieces and the india-rubber ribbon running along the outer edge, so that as the door closes, a protruding heel of the bead, as it were, is caught by the frame and pressed so as to open the parallel slip and cause its rubbered edge to press upon the floor or carpet, thus efficiently preventing all access of air or draught. Not only draughts, but dust and noise can thus be readily excluded, either by windows or doors.

When Perfumes should be used in the Sick Chamber.—Though the odours which we dislike are overpowered by others more agreeable, the former are neither removed nor destroyed; and the invalid continues to inhale them in spite of the warning given him by his sense of their injurious effects. This fact leads to the inference that the best means of removing a bad odour from a room is by proper ventilation. A fire in the grate, and the door left a-jar, or the window open top and bottom about an inch, will quickly change the atmosphere in the apartment; the vitiated air will flow up the flue, while fresh air will come in at the various portals. There are, however, instances when the doctor and the nurse positively prohibit this fresh air, and it is on such

grant substances is beneficial, not only because they hide the bad smells, but because—what is far more important—they act as a prophylactic in the atmosphere. The odorous substances of flowers are all antiseptic in a high degree, and being diffused into an atmosphere charged with malarious gases, they destroy their poisonous effects.

Pepsine is prepared by digesting the cleansed stomachs of sheep or pigs in distilled water, the resulting liquid with acetate of lead, separating the precipitate thus formed by filtration, then suspending it in water, and passing sulphuretted hydrogen through the water to decompose the lead precipitate. The liquid, after being gently heated and filtered, is evaporated nearly to dryness, and mixed with sufficient starch to form a powder. This powder is the so-called pepsine. Liquor pepticus præp. is sometimes a solution of this powder in distilled water, and sometimes the liquid obtained as above before it is evaporated to dryness, and mixed with starch. Frequently a little alcohol is added to it for its preservation. The dose of pepsine is about one scruple, and the liquor pepticus præp. in proportional quantity.

Mustard Leaves.—These are said to be prepared by fixing on strong paper a thin layer of mustard by means of a solution of caoutchouc in a volatile oil. To increase the activity of the mustard the fixed oil is extracted. The mustard leaves are used as substitutes for mustard poultices.

Addresses of Letters. — Be careful in placing your letter in the proper envelope. Most of our readers have doubtless heard of the well-known story of the manager of a company of players, who, in addressing a letter to the chief magistrate of a country borough soliciting his patronage, placed by accident in the envelope a letter which had been used the night previously in the performance of the play. It began, "Sir,—There is a plot formed to rob your house, and to cut your throat this night. The gang whereof I am one," &c. The letter, though bearing another signature, was traced to the manager, who was apprehended, and he was put to much trouble and inconvenience before he could satisfy the magistrate and obtain his liberation. Campbell, the poet, intending to communicate to a friend that he would bring his nephew along with him to dinner at his house, sent the letter in mistake to his nephew, who found himself described as a "red-headed Scotchman." Be particular in spelling your correspondent's name in the same manner as he himself does. Keep an address book with the names of your correspondents alphabetically arranged. Never address two or more unmarried ladies as the *Miss Beaumonts*, but as the *Misses Beaumont*. In concluding a letter to a lady, be more ceremonious than if you were writing to a gentleman. Thus, instead of abruptly closing with "Yours faithfully," write thus, "I am, madam, or Dear Mrs. or Miss ——, yours faithfully." If your correspondent is residing at the house of another person address thus,—"A. B., Esq., C. D., Esq., 40, Fifth Avenue, New York," or whatever C. D.'s address may be. Do not describe your friend as living "at," or address him "to the care of."

To restore Scorched Linen.—The accident of scorching linen is of such frequent occurrence that the following process is of great value. It is almost needless to premise that if the tissue of the linen is so much burnt that no strength is left, it is useless to apply it; for nothing could prevent a hole from being formed, although the composition would by no means tend to hasten that consummation. But if the scorching is not through, and the threads not actually consumed, then the application of this composition followed by two or three good washings, will restore the linen to its proper colour, and the marks of the scorching will be totally effaced. Mix well together two ounces of fuller's earth reduced to a powder; one ounce of hen's dung; half an ounce of cake soap, scraped; and the juice of two large

onions, obtained by the onions being cut up, beaten in a mortar and pressed. Boil this mass in half a pint of strong vinegar, stirring it from time to time, until it forms a thick liquid compound. Spread the composition thickly over the entire surface of the scorched part, and let it remain on twenty-four hours. If the scorching was light, this will prove sufficient, with the assistance of two subsequent washings, to eradicate the stain. If, however, the scorching was strong, a second coating of the composition should be put on after removing the first; and this should also remain on for twenty-four hours. If after the linen has been washed twice or thrice, the stain has not wholly disappeared, the composition may be used again, in proportion to the intensity of the discoloration remaining, when a complete cure will seldom fail to be effected. It has scarcely ever happened that a third application was found necessary. The remainder of the composition should be kept for use in a gallipot tied over with bladder.

Preserving Boots.—A coat of gum-copal varnish applied to the soles of boots and shoes, and repeated as it dries, until the pores are filled and the surface shines like polished mahogany, will make the soles water-proof, and also cause them to last three times as long as ordinary soles.

The Value of Leaves.—If every horticulturist would reflect for a moment on the nature of fallen leaves, which contain not only the vegetable matter, but the earthy salts, lime, potash, &c., needed for the next season's growth—and that, too, exactly in the proportion required by the very tree and plant from which they fell,—nay, more, if they would consider that it is precisely in this way, by the decomposition of these very fallen leaves, that nature enriches the soil, year after year, in her great forests; it would scarcely be possible for such a reflecting horticulturist to allow these leaves to be swept away by every wind that blows, and finally lost altogether. A wise horticulturist will diligently collect from week to week the leaves that fall under each tree, and, by digging them under the soil about the roots, where they will decay and enrich that soil, provide in the cheapest manner the best possible food for the tree. In certain vineyards in France, the vines are kept in the highest condition by simply burying at their roots every leaf and branch that is pruned off such vines, or that falls from them at the end of the season.

Tontine.—The term "Tontine" was first applied to loans given for life annuities with benefit of survivorship, so called from the inventor, Laurence Tonti, a Neapolitan. They were first set on foot in Paris to reconcile the people to Cardinal Mazarin's government, by amusing them with the hope of becoming suddenly rich, A.D. 1653. The celebrated Mr. Jennings was an original subscriber for a £100 share in a tontine company; and being the last survivor of the shareholders, his share produced him £3,000 per annum. He died worth £2,115,244, aged 103 years, June the 19th, 1798.

Population of Great Britain for Fifty Years.

U. Kingdom.	1821.	1831.	1841.	1851.	1861.	1871.
Eng. and Wales	12,172,664	14,051,986	16,035,198	18,054,170	20,228,497	22,704,108
Scotland.	2,137,325	2,405,610	2,652,339	2,922,362	3,096,808	3,358,613
Ireland.	6,869,544	7,828,347	8,222,664	6,623,982	5,850,309	5,402,750
Islands.	92,654	106,542	126,249	145,435	145,674	144,430
Army, Navy, and Merchant Seamen Abroad.....						207,198
U. Kingdom	21,272,187	24,392,485	27,036,450	27,745.949	29,321,288	31,817,108

The census of 1871 shows an increase of 2,637,884 persons, and 519,527 inhabited houses, in England and Wales, in Scotland, increases of 296,319 and 101,145; in the Channel Islands and Man, increases of 983 and 944; but in Ireland, a decrease of 396,208 persons (or 56,806 families), and 34,527 houses; giving, after these deductions, an increase of 2,537,978 persons and 511,812 inhabited houses. The population in cities and towns in England and Wales has grown more than twice as fast as that of the rural districts (1·73 per

cent. against ·71), and very nearly the the same percentage prevails in Scotland.

Languages of the World. — A recent writer says that altogether there are 587 languages and general dialects in Europe, 937 in Asia, 226 in Africa, and 1,264 in America; in all nearly 3,000. Monosyllables are the primitive sounds, and syllabic compounds are the result of interchange with other nations. Hence, all the fundamental tongues are monosyllabic as to generic ideas and compound species and varieties. According to his statements the Chinese, Welsh, Greek, Hebrew, and German are formed on this principle. The Chinese have 214 radical words and signs to represent these, out of which, by synthesis, other words are formed. There are said to be 25,000 words in English, 20,000 in Spanish, 25,000 in Latin, 30,000 in French, 45,000 in Italian, 50,000 in Greek, and 80,000 in German. The number of letters in the alphabets of different nations he gives as follows:—Italian, 20; Spanish, 27; English, 26; French, 23; German 26; Sclavonic, 27; Russian, 41; Latin, 22; Greek 24; Hebrew, 22; Arabic, 28; Persian, 30; and Chinese, 214.

Signs of the Zodiac. — The Zodiac is a space round the heavens—purely imaginary—15 degrees wide; the centre of which is the plane of the ecliptic, and it corresponds in breadth with the inclination of the sun's axis of 70° 30′, which thereby produces a maximum of force in that plane of the medium of space, but expanding as it diffuses around. The distant stars within it are divided into twelve portions, called signs: six to the north of the earth's equator, and six to the south; altogether fanciful but referring to the business of the season, when first applied, though to these superstition has annexed whimsical influences. The names of these signs, their hieroglyphics, and the days on which the sun enters them, are as follow: NORTHERN SIGNS—♈ *Aries*, the Ram, 21st of March. ♉ *Taurus*, the Bull, 19th of April. ♊ *Gemini*, the Twins, 20th of May. ♋ *Cancer*, the Crab, 21st of June. ♌ *Leo*, the Lion, 22d of July. ♍ *Virgo*, the Virgin, 22nd of August. SOUTHERN SIGNS—♎ *Libra*, the Balance, 23rd of September. ♏ *Scorpio*, the Scorpion, 23rd of October. ♐ *Sagittarius*, the Archer, 22nd of November. ♑ *Capricornus*, the Goat, 21st of December. ♒ *Aquarius*, the Water-bearer, 20th of January. ♓ *Pisces*, the Fishes, 19th of February. As we reckon the year by the earth's motions, and the solar year is 50·25″ of a degree shorter than the sidereal, so the time, when the sun is on our equator is earlier every year by 20′ 23″ of time; hence the equinoctial points recede among the stars; but as we always call the ascending point Aries, so the original stars go forward, and the equinoctial, with reference to them, recedes 50′ 25″ in a year; 1° 23′ 45″ in a century; a sign in 2,150 years; and the whole circle 25,791 years. It is, however, a mere change in relative appearances, and produces no mundane affection whatever.

Meteorological Instruments. —Every agriculturist should have, and be acquainted with the use of, the following instruments:—A barometer; a dry and wet-bulb thermometer; a thermometer with blackened bulb, to be placed in the full rays of the sun; a self-registering *minimum* thermometer, to be placed on the grass at night, for the purpose of registering the lowest temperature of vegetation; a *maximum* and a *minimum* self-registering thermometer, for showing the highest and lowest temperatures in the shade; a rain-gauge; and finally, a vane for showing the direction of the wind.

The Barometer.—How to Consult. — In *very hot* weather, the fall of the mercury denotes thunder. Otherwise, a sudden fall denotes high wind.

In *frosty* weather the fall of the barometer denotes thaw.

If *wet* weather happens soon after the fall of the barometer, expect *little* of it.

In *wet* weather, if the barometer falls, expect much wet.

In *fair* weather, if the barometer

falls much, and remains *low*, expect much wet in a few days, and probably wind.

N.B.—The barometer sinks lowest of all for wind and rain together; next to that for wind—(except it be an east or north-west wind).

In *winter*, the rise of the barometer denotes *frost*.

In *frosty* weather the rise of the barometer indicates *snow*.

If *fair* weather happens soon after the rise of the barometer, expect but little of it.

In *wet* weather, if the barometer rises high, and *remains* so, expect continued fine weather in a day or two.

In *wet* weather, if the mercury rises suddenly very high, fine weather will not last long.

An Inch of Rain, so often mentioned in Meteorological reports, means a gallon of water, spread over a surface two feet square; in other words, an inch of rain means a fall of 100 tons of water upon an acre of land.

Barometer Scales. — In America the height of the mercurial column in the barometer is usually stated in *inches;* in France it is invariably expressed in *millimetres*. As many of our scientific writers have adopted the metric measures, the following rules for converting millimetres into inches, and inches into millimetres will be found useful :—

To Convert Millimetres into Inches.—Multiply by 39,371, and point off six figures of the product as a decimal fraction. Examples :—

mm.				in.
760	×	39371	= 29,921960 or	29·922
762	×	39371	= 30,000702 or	30

To Convert Inches into Millimetres.—Multiply by 254 and point off in the product one figure, with as many more figures as there are decimal places in the number operated upon. Examples :

in.				mm.
29·922	×	254	= 760,0188 or	760
30	×	254	= 762,0 or	762

Fractions may be disregarded when millimetres are used to express the height of the mercurial column.

Thermometer Scales. — Two thermometric scales are employed in America; namely, the scale of Fahrenheit adopted in the Pharmacopœia, and the Centigrade scale, preferred by chemists and physicists. The more important points in the two scales are here indicated :—

	Fahr.	Cent.
Boiling point of water under the normal atmospheric pressure	212° =	100°
Temperature at which the Imperial measures are adjusted	62° =	16·6°
Temperature at which specific gravity is usually determined	60° =	15·5°
Temperature at which the metric measures are adjusted	39·2° =	4°
Melting point of ice, zero of Centigrade scale	32° =	0°
Zero of Fahrenheit's scale	0° =	—17·7°
Temperature at which mercury freezes, about	—40° =	—40°

To Convert Fahrenheit Degrees into Centigrade Degrees.—Subtract 32, multiply by 5, and divide by 9. To convert Centigrade into Fahrenheit degrees, multiply by 9, divide the product by 5, and add 32.

Leech Barometer.—The leech may be kept in a common two-ounce phial, about three-fourths filled with water, and tied over with a piece of rag. In the summer the water should be changed once a week, and in the winter once a fortnight. To consult it observe the following rules :—

1. If the weather proves serene and beautiful, the leech lies motionless at the bottom of the glass, rolled together in a spiral form.

2. If it rains, either before or after noon, it is found crept up to the top of its lodgings, and there it remains until the weather is settled.

3. If we are to have wind, the poor prisoner gallops through its limpid habitation with amazing swiftness, and seldom rests until it begins to blow hard.

4. If a remarkable storm of thunder and rain is to succeed, for some days before it lodges almost continually without water, and discovers uncom-

mon uneasiness, in violent throes and convulsive-like motions.

5. In the frost, as in the clear summer weather, it lies constantly at the bottom; and in snow, as in rainy weather, it pitches its dwelling upon the mouth of the phial.

The Aquarium may consist of either salt water and marine animals and plants, or fresh water and plants and fishes; the latter kind is perhaps the more amusing.

In order that the fish and other animals may retain their health, nay, even their life, oxygen is absolutely necessary—this the plants give off in large quantities; while the carbon necessary to the growth and sustentation of the plants is produced by the fishes, the two in combination preserve the water pure and fresh for almost any length of time; water has the power of absorbing certain quantities of atmospheric air and carbonic acid gas; the presence of the air gives to the rain and spring water its refreshing qualities. The leaves of plants, when acted upon by light, decompose this gas, and, having no necessity for oxygen, they merely absorb the carbon. Animals, on the other hand, require oxygen for the purpose of removing the waste carbon of great divisions of organized beings. But two other elements play an important part in the phenomenon of life—namely, nitrogen and hydrogen. Both plants and animals require these gases as food. They combine to form ammonia, which is found in small portions in the atmosphere and in water. Ammonia is indeed the main fertilizing element of vegetable life. Plants obtain their supply of it either through the natural water absorbed at their rootlets, or by means of artificial manures; animals through the means of the substance they devour. All forms of vegetable and animal life are built up of these four elements. All that we have to do, therefore, to keep our miniature world in activity is to imitate nature as closely as possible; to give fishes to the plants, and plants to the fishes; to keep up a proper supply of oxygen to the one and carbon to the other, the other gases being always present in sufficient quantity.

Various kinds of receptacles are used for both the marine and the fresh water aquaria. The square, or rectangular glass tank, is the most expensive, while an ordinary propagating glass turned upside down and placed in a stand, forms a very good-shaped vase, especially for fresh water animals.

Where the jointed glass is used it is sometimes found to leak, in which case either of the following cements will remedy the defect:—1. Mix boiled linseed oil, litharge, red and white lead together, to a proper consistence, always using the larger proportion of white lead. This composition may be applied to a piece of flannel and fitted to the joints.—2. A more powerful cement is composed in the proportion of two ounces of sal ammoniac, and four ounces of sulphur, made into a stiff paste with a little water. When the cement is wanted for use, dissolve a portion of the paste in water rendered slightly acid, and add a quantity of iron turnings or filings sifted or powdered, to render the particles of uniform size. This mixture will in a short time become as hard as stone.—3. Make a mixture of a solution of eight ounces of strong glue, and one ounce of varnish of linseed oil, or three-quarters of an ounce of Venice turpentine, which are to be boiled together, agitating all the time, until the mixture becomes as complete as possible. The pieces to be cemented ought to be kept in conjunction for forty-eight or sixty hours.

Next as to the filling and stocking. A sub-stratum of soil, in which the plants may grow, is necessary, just enough of sand, stones, and clay to cover the bottom; but no mud — nothing that is easily removable or apt to discolour the water. Then the weeds; and lastly, the animals. Ordinary pond water will do admirably for fresh-water aquaria, while good sea water is necessary for the marine tank. Weeds require very little soil. One of the most successful plants for the fresh-water aquarium is the *Anacharis alsinastrum*, the weed which so often

chokes our canals and rivers. It can be obtained in Covent Garden Market; or, indeed, of almost any gardener. It is a pretty, moss-like plant. Almost any weed may, however, be naturalized in the aquarium. The water-crowfoot *(Ranunculus aquatilis)* for instance, may be transplanted from almost any pool during April and May, and placed in the tank; it takes root and flourishes abundantly, as also do most of the pond weeds. Then for fish. The ordinary stickleback, if kept by themselves, are most amusing inhabitants; or the gold-fish, the carp, or the minnow may be profitably introduced. But, in order to keep down the green *confervæ*, a few snails are absolutely necessary. To these may be added water-newts, or efts, or even a good-sized toad; which, by the way, is by no means so repulsive an animal as is by many believed. But you must be careful not to introduce some kinds of water-beetles; but the diving spider *(Arga roueta aquatica)* will be found a most interesting addition.

As a general rule the best position for an aquarium is at a window where it may receive plenty of light, and yet not be subjected to direct sunshine, unless some provision is made for affording shelter for the fishes, for it must be borne in mind that fishes have no eyelids; it would, therefore, be as cruel to expose them to the rays of the sun, as to place a man whose eyelids were cut off in the same position. We have met with cases where ignorant, though well-meaning persons who have kept gold-fishes, have made a practice of placing the globe containing them in the sunshine, because, as they thought, it made them "so lively," whereas the unfortunate fishes were really darting about in agony, vainly attempting to escape from the blinding glare.

Some persons place the aquarium in such a position as to allow the light to enter it on all sides, while others prefer to darken one or more of the sides, or sometimes allow the light to enter at the top only. Sunshine for an hour or two a day accelerates the growth of the plants.

Repolishing Jewellery, &c.—A solution of cyanide of potassium in water is equal, if not superior to any compound that can be used for cleaning jewellery, the liquid cleaning all those parts of the work which neither brush, buff, nor thread could reach. Here is the method:—Dissolve one ounce of cyanide of potassium in three gills of soft water, turn up the end of a piece of brass or iron wire into a hook, attach it to the article to be cleaned, and immerse it in the solution, shaking it backward and forward for a second or two, then take it out and rinse well in clean water. Wash it with warm water and soap to remove any film of cyanide that may remain; rinse again, dip into spirits of wine, and dry in boxwood sawdust. The advantage of dipping in spirits of wine is the immediate drying of the work without any sticking of the sawdust to it. When done with the solution, put it in a bottle and cork tightly. It may be used again and again for some months. *Care should be taken not to wet the fingers with the solution, and not to inhale the odour, as the cyanide is a violent poison.*

The Weight of a Sunbeam.—Not only does light fly from the sun with a velocity which is a million times greater than the speed of a cannon-ball, but it darts from every reflecting surface with a like velocity, and reaches the eye so gently that, as it falls upon it, it imparts the most pleasing sensations. Philosophers once sought to weigh the sunbeam. They constructed a most delicate balance, and suddenly let in upon it a beam of light. The lever of the balance was so delicately hung that the fluttering of a fly would have disturbed it. Everything prepared, the grave men took their places, and with keen eyes watched the result. The sunbeam that was to decide the experiment had left the sun eight minutes prior, to pass the ordeal. It had flown through 95,000,000 miles of space in that short measure of time, and it shot upon the balance with unabated velocity. But the lever moved not; and the philosophers were mute!

CROQUET (*see p.* 253).

OUT-DOOR AMUSEMENTS.

To face p. 247.

X. GAMES AND THEIR RULES.

Cricket.—This, the most popular of all English games, is played all over the country during May, June, July, August, September, and October. Cricket may be played by two or more persons, with a bat, ball, and stumps. The grand object of the game is for the batsman to make the greatest number of hits and runs from a ball bowled to him by another player at a certain distance. When a few persons play, the game is called single-wicket; when a dozen or more play they are divided into sides, and play double-wicket; and when twenty-two play the game is cricket proper, or the regular match game of eleven a side. In the first game the batsman, when he makes a sufficiently good hit, runs from the three stumps—which constitute the wicket—to the bowler's stump and back again, and this double journey constitutes one run at single-wicket. In the latter games there are two wickets set up, at each of which stands a batsman; and whenever either succeeds in hitting away the ball, the two run from wicket to wicket, and for every time they change places one run is scored to the striker of the ball. In both games the striker is out if the bowler strike his wicket with the ball; or if he himself hit his wicket; or if he hit a ball and it be caught by one of the opposing party before it touches the ground; or if he run out of his ground to hit a ball, and the wicket-keeper "stumps" him; or if his wicket be put down by the ball while he is running for a hit; or if his leg, or any part of his person—except his hands—intercept a ball that would have hit the wicket.

In the full match game the two parties toss up for first innings; and two players belonging to the side that wins the toss go in, one at each wicket. The out-party place themselves in various situations about the field, to catch or stop the ball when struck by the batsmen. One of the bowlers commences bowling either four or six successive balls (as may previously have been agreed upon); if he succeed in bowling down the wicket the batsman retires from the game, and another of his party takes his place. If, however, the ball is struck by the batsman, he and his partner keep running to each other's wicket and back again, until their opponents obtain possession of the ball and throw it in to the wicket-keeper; and one run is scored towards the game every time they change wickets. Every run obtained by a blow from the bat is scored to the batsman making it; but byes, wides, no-balls, &c., are scored to the credit of his side. When the player who commenced bowling has bowled either the four or six balls as agreed upon, the umpire at his wicket calls "Over," and the fieldsmen reverse their positions by taking corresponding ones for the other wicket. The same number of balls are then delivered from the other end by another player, and so on alternately. When all the players belonging to the in-party are out, they change places with their opponents, and bowl to them until their innings are over. When each side has had two innings, the runs are counted, and the party that has obtained the greatest number is declared the conqueror.

The Laws of the Game, as revised by the Marylebone Club:—

I. The ball must weigh not less than five ounces and a-half, nor more than five ounces and three-quarters. It must measure not less than nine inches, nor more than nine inches and one-quarter in circumference. At the beginning of each innings either party may call for a new ball.

II. The bat must not exceed four

inches and one-quarter in the widest part; it must not be more than thirty-eight inches in length.

III. The stumps must be three in number; twenty-seven inches out of the ground; the bails eight inches in length; the stumps of equal and of sufficient thickness to prevent the ball from passing through.

IV. The bowling-crease must be in a line with the stumps; six feet eight inches in length; the stumps in the centre; with a return-crease at each end towards the bowler at right angles.

V. The popping-crease must be four feet from the wicket, and parallel to it; unlimited in length, but not shorter than the bowling-crease.

VI. The wickets must be pitched opposite to each other by the umpires, at a distance of twenty-two yards.

VII. It shall not be lawful for either party during a match, without the consent of the other, to alter the ground by rolling, watering, covering, mowing, or beating, except at the commencement of each innings, when the ground shall be swept and rolled, unless the side next going in object to it. This rule is not meant to prevent the striker beating the ground with his bat near to the spot where he stands during the innings, nor to prevent the bowler from filling up holes with sawdust, &c., when the ground shall be wet.

[The Committee of the Marylebone Cricket Club think that the umpire should have the power to prevent the batsman injuring the ground with either bat or foot.]

VIII. After rain the wickets may be changed.

IX. The bowler shall deliver the ball with one foot on the ground behind the bowling-crease, and within the return-crease, and shall bowl four balls before he change wickets, which he shall be permitted to do only twice in the same innings.

[In one-day matches it is usual to allow five or six balls for an over.]

X. The ball must be bowled. If thrown or jerked, the umpire shall call "No ball."

XI. He may require the striker at the wicket from which he is bowling to stand on that side of it which he may direct.

XII. If the bowler shall toss the ball over the striker's head. or bowl it so wide that, in the opinion of the umpire, it shall not be fairly within reach of the batsman, he shall adjudge one run to the party receiving the innings, either with or without appeal, which shall be put down to the score of wide balls; such ball shall not be reckoned as one of the four balls; but if the batsman shall by any means bring himself within reach of the ball, the run shall not be adjudged.

XIII. If the bowler deliver a "no ball" or a "wide ball," the striker shall be allowed as many runs as he can get, and he shall not be put out except by running out. In the event of no run being obtained by any other means, then one run shall be added to the score of "no balls" or "wide balls," as the case may be. All runs obtained for "wide balls" to be scored to "wide balls." The names of the bowlers who bowl "wide balls" or "no balls" in future to be placed on the score, to show the parties by whom either score is made. If the ball shall first touch any part of the striker's dress or person (except his hands), the umpire shall call "leg bye."

XIV. At the beginning of each innings the umpire shall call "Play;" from that time to the end of each innings no trial ball shall be allowed to any bowler.

[It is not unusual, however, to allow a trial ball to each new bowler; though not on the wicket.]

XV. The striker is out if either of the bails be bowled off, or if a stump be bowled out of the ground;

XVI. Or, if the ball, from the stroke of the bat, or hand, but not the wrist, be held before it touch the ground, although it be hugged to the body of the catcher;

XVII. Or, if in striking, or at any other time, while the ball shall be in play, both his feet shall be over the popping-crease, and his wicket put

down, except his bat be grounded within it;

XVIII. Or, if in striking at the ball, he hit down his wicket;

XIX. Or, if under pretence of running, or otherwise, either of the strikers prevent a ball from being caught, the striker of the ball is out;

XX. Or, if the ball be struck, and he wilfully strike it again.

[In cases, however, in which, after blocking a ball, it flies or rolls back towards his wicket, the batsman is allowed to strike or block it away from the stumps; but he cannot get a run from such a hit.]

XXI. Or, if in running, the wicket be struck down by a throw, or by the hand or arm (with ball in hand), before his bat (in hand) or some part of his person be grounded over the popping-crease. But if both the bails be off, a stump must be struck out of the ground;

XXII. Or, if any part of the striker's dress knock down the wicket;

XXIII. Or, if the striker touch or take up the ball while in play, unless at the request of the opposite party;

XXIV. Or, if with any part of his person he stop the ball, which in the opinion of the umpire at the bowler's wicket, shall have been pitched in a straight line from it to the striker's wicket, and would have hit it.

XXV. If the players have crossed each other, he that runs for the wicket which is put down is out.

XXVI. A ball being caught no runs shall be reckoned.

XXVII. A striker being run out, that run which he and his partner were attempting, shall not be reckoned.

XXVIII. If a lost ball be called, the striker shall be allowed six runs; but if more than six shall have been run before lost ball shall have been called, then the striker shall have all which have been run.

XXIX. After the ball shall have been finally settled in the wicket-keeper's or bowler's hand, it shall be considered dead; but when the bowler is about to deliver the ball, if the striker at his wicket go outside the popping crease before such actual delivery, the said bowler may put him out, unless (with reference to the 21st law) his bat in hand, or some part of his person, be within the popping-crease.

XXX. The striker shall not retire from his wicket, and return to it to complete his innings after another has been in, without the consent of the opposite party.

XXXI. No substitute shall in any case be allowed to stand out or run between wickets for another person without the consent of the opposite party; and in case any person shall be allowed to run for another, the striker shall be out if either he or his substitute be off the ground in manner mentioned in laws 17 and 21, while the ball is in play.

XXXII. In all cases where a substitute shall be allowed, the consent of the opposite party shall also be obtained as to the person to act as substitute, and the place in the field which he shall take.

XXXIII. If any fieldsman stop the ball with his bat, the ball shall be considered dead, and the opposite party shall add five runs to their score; if any be run they shall have five in all.

XXXIV. The ball having been hit, the striker may guard his wicket with his bat, or with any part of his body except his hands; that the 23rd law may not be disobeyed.

XXXV. The wicket-keeper shall not take the ball for the purpose of stumping, until it have passed the wicket; he shall not move until the ball be out of the bowler's hand; he shall not by any noise incommode the striker; and if any part of his person be over or before the wicket, although the ball hit it, the striker shall not be out.

XXXVI. The umpires are the sole judges of fair or unfair play, and all disputes shall be determined by them, each at his own wicket; but in case of a catch which the umpire at the wicket bowled from cannot see sufficiently to decide upon, he may apply to the other umpire, whose opinions shall be conclusive.

XXXVII. The umpires in all

matches shall pitch fair wickets ; and the party shall toss up for choice of innings. The umpires shall change wickets after each party has had one inning.

XXXVIII. They shall allow two minutes for each striker to come in, and ten minutes between each innings. When the umpire shall call "Play," the party refusing to play shall lose the match.

XXXIX. They are not to order a striker out, unless appealed to by the adversaries ;

XL. But if one of the bowler's feet be not on the ground behind the bowling crease, and within the return crease when he shall deliver the ball, the umpire at his wicket, unasked, must call "No Ball."

XLI. If either of the strikers run a short run, the umpire must call "One Short."

XLII. No umpire shall be allowed to bet.

XLIII. No umpire is to be changed during a match, unless with the consent of both parties, except in case of violation of the 42nd law ; then either party may dismiss the transgressor.

XLIV. After the delivery of four balls the umpire must call "Over," but not until the ball shall be finally settled in the wicket-keeper's or bowler's hand ; the ball shall then be considered dead : nevertheless, if an idea be entertained that either of the strikers is out, a question may be put previously to, but not after, the delivery of the next ball.

XLV. The umpire must take especial care to call "No Ball" instantly upon delivery ; "Wide Ball" as soon as it shall pass the striker.

XLVI. The players who go in second shall follow their innings, if they shall have obtained eighty runs less than their antagonists, except in all matches limited to only one day's play, when the number shall be limited to sixty instead of eighty.

XLVII. When one of the strikers shall have been put out, the use of the bat shall not be allowed to any person until the next striker shall come in.

NOTE.—The committee of the Marylebone Club think it desirable that previously to the commencement of a match, one of each side should be declared the manager of it ; and that the new laws with respect to substitutes may be carried out in a spirit of fairness and mutual concession, it is their wish that such substitutes be allowed in all reasonable cases, and that the umpire should inquire if it is done with the consent of the opposite side.

SINGLE WICKET. — This game is played in the same general manner as double wicket ; with the exceptions pointed out in the following rules :— The distance between the wickets is precisely the same as at double wicket, consequently the batsman has twice the ground to go over in obtaining each run. As a remedy for this evil the runs are sometimes made fifteen yards in length, instead of twenty-two ; by placing a mark at that distance from the wicket ; the striker putting his bat or foot on or over the mark to entitle him to a run.

The Laws of Single Wicket.—I. When there shall be less than five players on a side, bounds shall be placed twenty-two yards each in a line from the off and leg-stump.

II. The ball must be hit before the bounds to entitle the striker to a run, which run cannot be obtained unless he touch the bowling-stump or crease in a line with his bat or some part of his person, or go beyond them, returning to the popping-crease as at double wicket, according to the 21st law.

III. When the striker shall hit the ball, one of his feet must be on the ground, and behind the popping-crease, otherwise the umpire shall call "No Hit."

IV. When there shall be less than five players on a side, neither byes nor overthrows shall be allowed, nor shall the striker be caught out behind the wicket, nor stumped out.

V. The fieldsman must return the ball so that it shall cross the play between the wicket and the bowling-stump, or between the bowling-stump and the bounds ; the striker may run till the ball be so returned.

VI. After the striker shall have

made one run, if he start again he must touch the bowling-stump, and turn before the ball cross the play to entitle him to another.

VII. The striker shall be entitled to three runs for lost ball, and the same number for ball stopped with bat, with reference to the 28th and 33rd laws of double wicket.

VIII. When there shall be more than four players on a side there shall be no bounds. All hits, byes, and overthrows, shall then be allowed.

IX. The bowler is subject to the same laws as at double wicket.

X. No more than one minute shall be allowed between each ball.

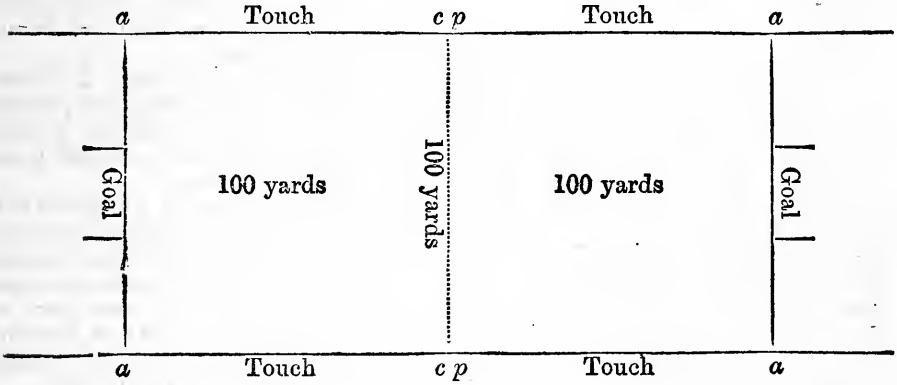
Laws Relating to Bets.—I. No bet upon any match is payable, unless it be played out or given up.

II. If the runs of one player be betted against those of another, the bet depends on the first innings, unless otherwise specified.

III. If the bet be made on both innings, and one party beat the other in one innings, the runs of the first innings shall determine it.

IV. If the other party go in a second time, then the bet must be determined by the number of the score.

Football.—This game is played by two parties or sides, who stand between two goals marked out in a field. The object of each side is to defend its own goal, and to kick the ball through the goal of the opposite side. The goals are placed two hundred yards apart; and the side that kicks the first two out of three goals wins the game. The goals are of wood, with cross pieces; and their position is shown in the following figure:—



PLAN OF GROUND.

The goals at either end; *a a*, the goal lines; *c p*, centre posts marking middle of ground; *touch*, the touch lines.

Technical Terms used in the Game.

A Place Kick—Is a kick at the ball while it is on the ground, in any position in which the kicker may choose to place it.

A Free Kick—Is the privilege of kicking the ball, without obstruction, in such a manner as the kicker may think fit.

A Fair Catch—Is when the ball is caught after it has touched the person of an adversary, or has been kicked, knocked on, or thrown by an adversary, and before it has touched the ground, or one of the side catching it; but if the ball is kicked from out of touch, or from behind goal line, a fair catch cannot be made.

Hacking—Is kicking an adversary below the knee.

Tripping—Is throwing an adversary

by the use of the legs, without the hands, and without hacking or charging.

Charging—Is attacking an adversary with the shoulder, chest, or body, without using the hands or legs.

Knocking on — Is when a player strikes or propels the ball with his hands, arms, or body, without kicking or throwing it.

Holding—Includes the obstruction of the player by the hand, or any part of the arm below the elbow.

Touch—Is that part of the field, on both sides of the ground, which is beyond the line of flags.

Rouges.—The touching of the ball beyond the touch-lines on the opponent's side of the centre line.

Touching down.—Touching the ball with the hand, so as to make it fall to the ground.

Following Kick.—Kicking a ball that is rolling.

Meeting Kick.—Kicking a ball that comes in front of the player.

Drop Kick.—A ball dropped from the hand and kicked as it falls.

The Laws of Football, as admitted by London players :—

I. That the maximum *length of the ground* shall be two hundred yards, the maximum *breadth* shall be one hundred yards; the length and breadth shall be marked off with flags; and the *goal* shall be defined by two upright posts, eight yards apart, without any tape or bar across.

II. *The game shall be commenced* by a *place kick* from the centre of the ground by the side winning the toss; the other side shall not approach within ten yards of the ball until it is kicked off. After a good goal is won, the losing side shall be entitled to kick off.

III. The two sides shall change goals after each goal is won.

IV. A goal shall be won when the ball passes over the space between the goal-posts (at whatever height), not being thrown, knocked on, or carried.

V. When the ball is *in touch,* the first player who touches it shall kick or throw it from the point on the boundary line where it left the ground, in a direction at right angles with the boundary line.

VI. A player shall be *out of play* immediately he is in front of the ball, and must return behind the ball as soon as possible. If the ball is kicked past a player by his own side, he shall not touch or kick it, or advance until one of the other side has first kicked it, or one of his own side on a level with, or in front of him, has been able to kick it.

VII. In case the ball goes beyond the goal line, if a player on the side to whom the goal belongs first touches the ball, one of his side shall be entitled to a free kick from the goal line at the point opposite the place where the ball shall be touched. If a player on the opposite side first touches the ball, one of his side shall be entitled to a free kick from a point fifteen yards outside the goal line, opposite the place where the ball is touched.

VIII.—If a player makes a *fair catch,* he shall be entitled to a *free kick,* provided he claims it by making a mark with his heel at once; and in order to take such kick, he may go as far back as he pleases, and no player on the opposite side shall advance beyond his mark until he has kicked.

IX.—A player shall be entitled to run with the ball towards his adversaries' goal if he makes a fair catch, or catches the ball on the first bound; but in the case of a fair catch, if he makes his mark, he shall not then run.

X. If any player shall run with the ball towards his adversaries' goal, any player on the opposite side shall be at liberty to charge, hold, trip, or hack him, or to wrest the ball from him; but no player shall be held and hacked at the same time.

XI. Neither tripping nor hacking shall be allowed, and no player shall use his hands or elbows to hold or push his adversary, except in the case provided for by Law X.

XII. Any player shall be allowed to charge another, provided they are both in active play. A player shall be allowed to charge, if even he is out of play.

XIII.—A player shall be allowed to throw the ball, or pass it to another, if he make a fair catch, or catches the ball on the first bound.

XIV. No player shall be allowed to wear projecting nails, iron plates, or gutta-percha on the soles or heels of his boots. After each game the parties change goals, so any advantages of wind, sloping ground, &c., are neutralized.

[The rules governing the game vary according to the places in which it is played.]

Hockey is played by any number with hockey-sticks and a bung, or ball, according to the following *Rules:*—

I. The ball must be struck with the stick, and not kicked with the foot or touched by the hand.

II. The ball must be struck fairly through the goal before the side can claim the game.

III. The goals must be marked by lines at either end; and in the centre, equidistant from each end, a line is to be drawn across the ground, over which central line the players on either side are not allowed to pass.

IV. The ball must be struck from right to left, and be stopped with the stick, and not with the hand.

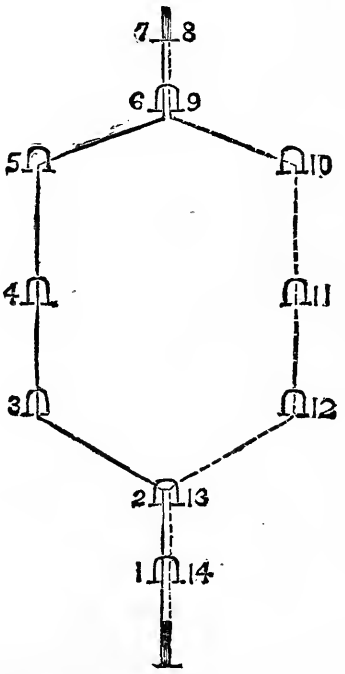
V. If the ball bound against the person of a player, he must allow it to reach the ground before he strikes at it.

VI. The captain on each side is to regulate the order of his game; and it is the duty of any player to fetch the ball from a distance when commanded by his captain.

VII. Any player who strikes another, or wilfully breaks any of the rules, is out of the game.

Golf, or "Bandy Ball," is much played in Scotland and the northern parts of England. Each player has a straight-handled ash bat, the lower part of which is slightly curved; the object of the game is to drive a small hand-ball into certain holes in the ground, and he who soonest accomplishes this wins the game. The St. Andrew's, and other clubs in Scotland, have elaborate Rules for playing this game, but the following general plan is invariably followed:—Two, four, or any number of players form themselves into sides, and then fix the golf-lengths, which often extend over three or four miles; especially in the winter-time, when the game is played on the ice. At various intervals golf-holes are formed, into which the ball must be struck; each party, as in football, endeavouring to drive the ball in an opposite direction. One or more balls may be used, but each player has his own bandy.

Croquet. — This game may be played by two or more persons, its object being to strike a wooden ball with a mallet through a series of hoops set in the ground, according to some regular plan. The following is the original method :—



Technical Terms used in the Game:—

Roquet is to hit another ball with your own.

Croqueted.—When two balls are in contact, and the player, placing his foot on his own ball, strikes it, and by that means cannons the other

away, he is said to have croqueted that ball.

The *tour* is the turn given to each player. This continues till he fails to strike his ball through a hoop.

Rover.—A player who, after making the complete round of the hoops, continues in the game to assist his side; as explained in Law X.

Wired is a term used when a ball is in contact with a hoop so as to prevent it going through.

To peg is to strike at either of the pegs in proper order of play.

To dismiss a ball is to croquet it to a distance.

A bridged ball is one that has run the first arch.

A dead ball is one that is in hand or out of the game for the time being.

Other terms, such as "nursing," "straight stroke," "running a hoop," "over-running," "side stroke," &c., sufficiently explain themselves.

Laws of Croquet. — The remarks within brackets are for the guidance of the players.

I. Each player must start from a mallet's length from the starting-peg, and strike his ball at or through the first hoop. [Called "making the hoop."]

II. The players on each side take alternate strokes, according to the colours of the ball. [The colours of the balls determine the order of play.]

III. The player proceeds till he misses a hoop, or fails to croquet another ball.

IV. After roqueting a ball the player must croquet it. [That is, after the player has struck an opponent's ball, which is called roqueting it, he croquets it thus—he puts his ball touching the one struck, then places his foot on *his own ball* and strikes it with his mallet, or he may strike the ball without putting his foot on it. He may use any degree of force in croqueting a ball, and send it in any direction.]

V. The croqueted ball must be moved, or it is no stroke.

VI. No player can croquet or be croqueted till his ball has passed through the first hoop.

VII. The player who misses the first hoop takes up his ball and waits till his turn comes round to play it again.

VIII. A player may croquet any number of balls consecutively, but he must not hit the same ball twice during the same turn without first sending his ball through the hoop next in order.

IX. Instead of playing at a hoop or ball, the players may strike the ball away to any part of the ground.

X. The player who has made the complete circuit of the hoops—from the starting-peg, round the turning-peg, and back again through the last hoop—may either retire from the game by hitting the starting-peg, or else become a "rover" by avoiding hitting this peg for a time. A "rover" has the privilege of croqueting all the balls during any one of his turns for play. But of course he only takes his turn in regular order.

XI. A roqueted ball is dead, and in hand till after the player of it has taken the croquet.

XII. The ball must be hit and not merely pushed. [It will not be considered a stroke if you simply push your mallet forward. The stroke on the ball is considered fair if it can be heard.]

XIII. The ball must be struck with the face of the mallet, and not with the handle or the side.

XIV. The player is not restricted to any attitude in striking the ball, so long as it be fairly hit.

XV. Any player hitting the starting-peg after he has made the round of the hoops is out of the game, no matter whether his ball hit the peg by a stroke of his own mallet, or by being croqueted by an opponent. When a player is out of the game, the rest proceed as before. [See Law X.]

XVI. The clip is to be placed on the hoop through which the player is next going, with the *spot* towards the starting-peg on one side, and the turning-peg on the other.

XVII. A ball is considered to have made its hoop if it cannot be touched

by the mallet's handle placed across the wires from side to side.

XVIII. If a player stop at the turning-peg, he loses his turn, and the stroke does not count. [Even though he have roqueted the ball off the peg, he must start from the place at which his ball stopped.]

XIX. The side which first makes the round completely, wins the game.

XX. The decision of the umpire is final; where no umpire is appointed, the opinion of the majority of by-standers is to be taken on all points of dispute. [It is more satisfactory to appoint an umpire.]

Billiards.—This game is played on a green cloth-covered board, with india-rubber cushions, and six pockets, and the object of the game is to drive one ivory ball against another, so as to lodge one or the other in a pocket, or to make cannons, by striking two balls successively with a third ball, by means of a leather-tipped cue. The table is of various dimensions—from that of the regular twelve feet by six, to miniature tables of four feet by two. In every case the length of the table is double that of its width, within the cushions. Every table, whatever its size, is furnished with a semicircle, called the baulk or striking point, from which the game is commenced; and three little spots, the upper one known as "the spot," the centre one as "the middle spot," and lower one, midway between the cushions on the straight baulk line from which the semicircle is struck, called "the baulk spot."

The usual game is fifty or one hundred up, and is made up of winning and losing hazards, cannons, misses, and various penalties. A winning hazard is made by forcing the ball you play at into a pocket, after contact with the ball you play with. If your own ball fall into a pocket, after contact with the object ball—which is the ball played upon—you make a losing hazard; and if you strike two balls in succession with your own ball you make what is called a cannon.

For every losing hazard off the red, and for a winning hazard made by pocketing the red ball, *three* points are scored; for every white winning or losing hazard, and for every cannon, *two* points are scored. Every miss counts *one* against the player, every coup *three;* and all foul strokes are subjected to forfeits, according to the rules which are here given.

The red ball is placed on the spot at the commencement of the game. The players then string for lead and choice of balls; and he who loses the lead either begins playing by striking the red ball or by giving a miss in baulk. If the first player give a miss or fail to score off the red ball, the second player goes on and tries to score by making a hazard or cannon. If he succeed he goes on scoring till he miss a strike, and so the game proceeds, each player making as many as he can off his break till the allotted fifty (or one hundred) points be reached—he who first makes the required number winning the game.

Stringing for the Lead is done in this way:—Each player places his ball within the baulk semicircle, and strikes it with the point or butt-end of his cue to the top cushion; and the player of the ball which stops nearest to the cushion at the baulk-end of the table wins the lead, and chooses his ball. Where points are given, the receiver of the points leads off.

The following are the recognised *Rules*, with some few explanatory remarks:—

Laws of Billiards.—I. The game commences by stringing for the lead and choice of the balls.

[If one ball, in stringing, strike the other, the players must string over again.

II. The red ball must be placed on the spot, and replaced there when it is holed, or forced over the edge of the table, or when the balls are broken.

["Breaking the balls" is the replacing them as at the beginning of the game—the red on the spot, and each player's ball in hand—when he who has to break the ball plays at the red, or gives a miss. The balls are said to be broken when the first

player has struck the red or given a miss.]

III. The player who makes one stroke in a game must finish that game, or consent to lose it.

[This law is intended to meet cases of dispute, when he who refuses to continue the game loses it.]

IV. The striker who makes any points continues to play until he ceases to score, by missing a hazard or otherwise.

V. If, when the cue is pointed, the ball should be moved without the striker intending to strike, it must be replaced; and if not replaced before the stroke be played, the adversary may claim it as a foul stroke.

VI. If a ball spring from the table, and strike one of the players, or a bystander, so as to prevent its falling on the floor, it must be considered as off the table.

VII. When a ball runs so near the brink of a pocket as to stand there, and afterwards fall in, it must be replaced, and played at, or with, as the case may be.

[The challenging a ball, as in bagatelle, is not allowed in billiards. If the ball roll into the pocket before the striker makes his next stroke, he claims it, and the points made by it must be scored.]

VIII. When the player's ball is off the table (in hand), and the other two balls are in baulk, the possessor of the ball in hand cannot play at the balls in baulk, but must strike his ball beyond the semicircle, or play at a cushion out of baulk.

[In such a case the player may use a butt, or play with the butt-end of his cue, and strike at a cushion out of baulk, so that his ball on its return may hit the balls in baulk for a cannon or hazard.]

IX. A line ball cannot be played at by the striker whose ball is in hand.

[A *line ball* is when the centre of the ball is exactly on the line of the baulk, in which case it is to be considered in the baulk, and cannot be played at, except from a cushion out of the baulk.]

X. All misses must be given with the point of the cue, and the ball is to be struck only once; if otherwise given, the adversary may claim it as a foul stroke, and enforce the penalty —make the striker play the stroke over again—or have the ball from where it was struck the second time.

[It is usual, however, to allow the player to give a miss in baulk, with the butt-end of his cue, when he plays his ball to the top cushion.]

XI. No player can score after a foul stroke.

[The following are *foul strokes*:—If the striker move his ball *in the act of striking* and fail to make a stroke; or if he play with the wrong ball; or if he touch his own ball twice in playing; or if he strike a ball while it is running; or if he touch another ball with his hand; or if his feet be off the floor when playing. The penalty in all these cases is losing the lead and breaking the balls. Enforcing the penalty for a foul stroke is entirely at the option of the adversary.]

XII. If the adversary neglect to enforce the penalty for a foul stroke, the striker plays on, and scores all the points that he made by the foul stroke, which the marker is bound to score.

XIII.—*Two* points are scored for every white hazard, *two* for every cannon, and *three* for every red hazard.

XIV. When the red ball be pocketed, or off the table, and the spot on which it should stand be occupied by the white ball, the red must be placed in a corresponding situation at the other end of the table; but if that should be occupied also by the other white ball, the red must be placed on the spot in the centre of the table, between the two middle pockets; and wherever it is placed, there it must remain, until it be played, or the game be over

XV. If the striker miss the ball he intended to play at, he loses *one* point; and if by the same stroke his own ball runs into a pocket, or off the table, he loses *three* points.

[That is to say, his opponent scores the points forfeited by the miss or the

coup. All misses count towards your adversary's game.]

XVI. If the striker force his own or either of the other balls over the table, after having struck the object-ball, or after making a hazard or cannon, he neither gains nor loses by the stroke, and his adversary plays on without breaking the balls.

XVII. If the striker wilfully force his ball off the table without striking another ball, he loses three points; but if the ball goes over by accident he loses one point only for the miss.

XVIII. If the striker play with the wrong ball, and a cannon or hazard be made therewith, the adversary may have the balls broken; but if nothing be made by the stroke, the adversary may take his choice of balls for the next stroke, and with the ball he chooses he must continue to play until the game is over.

XIX. The playing with the wrong ball must be discovered by the adversary before the next stroke is played; otherwise no penalty attaches to the mistake, and the player goes on and scores all the hazards he makes.

XX. If the striker's ball be in hand, and the other two balls within the baulk, and should he, either by accident or design, strike either of them, without first playing out of the baulk, his adversary has the option of letting the balls remain as they are, and scoring a miss; of having the ball so struck replaced in its original position, and scoring a miss; of making the striker play the stroke over again, or of calling a foul stroke and break the balls.

XXI. If the striker's ball be in hand, he must not play at a cushion within the baulk, in order to strike a ball that is out of it.

XXII. When a ball is on the brink of a pocket, if the striker, in drawing back his cue, knock the ball into the pocket, he loses three points.

XXIII. In giving a miss from baulk, should the player fail to strike his ball out of baulk, his adversary may either let it remain so, or compel him to play the stroke over again.

XXIV. When the striker, in giving a miss, make a foul stroke, his adversary may claim it as such, and enforce the penalty. In such a case, the point for the miss is not scored.

XXV. No person is allowed to take up a ball during the progress of a game without permission of the adversary; but a ball in play that is moved by accident must be replaced.

XXVI. *The striker loses the game* if, after making a stroke, and thinking the game over, he removes a ball that is in play from the table.

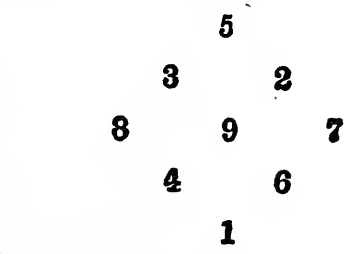
XXVII. Neither the player nor his adversary is allowed to obstruct the course of a ball in play, under the penalty of a forfeit for a foul stroke, and the breaking of the balls.

XXVIII. If the striker's ball, when it has ceased running, touch his opponent's ball, no score can be made, and the latter must break the balls.

[The striker in this case may run his ball into a pocket, or make a cannon by playing it on to the third ball. If he do either of these, the balls must be taken up, and the red placed on the spot where the adversary plays from baulk, as at the beginning of the game —that is to say, he breaks the balls. But if the striker fail to cannon or pocket his own ball, all the balls remain as they are when they cease rolling, and the other player goes on as usual.]

XXIX. All disputes are to be settled by the marker, or by the majority o the bystanders.

Bagatelle.—This game is played upon an oblong board, its object being to strike ivory balls with a cue into holes made at one end of the board and numbered as follows :—



The game is played by two persons,

or any equal number taking sides. The regular English game is played according to the following Rules :—

La Bagatelle.—

I. Any number of persons may play, whether singly or in "sides."

II. Each player "strings for lead," and he who lodges his ball in the highest hole begins.

[In playing sides, one partner on each side only need string for the lead.]

III. The player who wins the lead takes possession of the nine balls, and begins the game.

IV. The black ball is placed on the spot in front of the first hole, and the player plays from the baulk by striking at the black ball, and endeavouring to hit it, or his own ball, or both balls, into a hole or holes.

V. The black ball counts double into whichsoever hole it falls.

[Sometimes a black ball and a red ball are used, both of which count double. The cups are numbered, and into whichever cup the balls fall, so many are counted for the player.]

VI. The striker's ball must be placed within the baulk-line, and is struck with the cue at the black ball. The remainder of the balls are then driven up the board in like manner, and the sum total of the holes made is the striker's score.

VII. Any number of rounds may be played for the game, as agreed on previous to the commencement of the game.

VIII. The player (or side) obtaining the highest aggregate score wins the game.

IX. Any ball that rebounds beyond the baulk-line, or is forced over the board, is not to be again played during that round.

The French Game.—This game, also called "sans Egal" is played thus :—

I. The person who takes the lead (decided as in "La Bagatelle") makes choice of four balls of either colour, and places the black ball on the spot, and commences by striking up one of his balls.

II. The other player then strikes up one of his, and so on alternately.

III. He that holes the black ball counts it towards his game, and also all that he may hole of his own.

IV. If a player hole any of his adversaries' balls the number is scored to the owner of them.

V. The player who makes the greatest numer of points in each round wins the game, and takes the lead in the next.

The Canon Game.—This is played by two or more persons thus :—

I. Choice of balls, and the lead having been decided, the black must be placed on the spot, and the adversary's equi-distant between cups No. 1 and 9.

II. If the player strike both the balls with his own ball he scores two. This is called a canon—and if at the same time he hole either of the balls, he also scores the number marked in the cups—the black back ball counting double.

III. The striker continues to play as long as he scores.

IV. There is no score unless a canon be made.

V. If either the adversary's or the black ball are holed, or roll beyond the baulk-line, they must be replaced on their respective spots.

VI. The black ball must be always struck by the player's ball, or in default of this, the adversary scores five. A miss also counts five to the adversary.

VII. The game is 120 or 150, as may be agreed upon.

The Irish Canon Game.—This is played in the same way, only that the holes count, even if a canon should *not* be made. Should the *player's* ball, however, in any case go into a hole *it* counts to the adversary, and anything else made by the same stroke is forfeited. When there are pockets to the table, the white and red balls pocketed count each two, and the black ball three. Sometimes three is counted for a canon from the black to the red ball, and *vice versâ*, and two for a canon from the white to a coloured ball, or from a coloured to a white one.

Mississippi.—This game is played according to the following rules, on

the Bagatelle-board, with a bridge pierced with numbered holes, thus:—

I. Place the bridge close up to the circle.

II. Each player to strike up one ball; he who gets the highest number takes the lead, and plays the nine balls successively.

III. All balls must strike one of the cushions previous to entering the bridge, otherwise the number will be scored to the adversary.

IV. The game to be any number agreed upon before the commencement.

Trou Madame.—This game is played in the same way as Mississippi, except that the balls are played straight from the end of the board, through the arches of the bridge.

Chess.—The game is played by two persons on a board of sixty-four squares alternately black (or any other dark colour) and white, with sixteen pieces on either side, which are also coloured black (or red) and white to distinguish those belonging to each player. The pieces consist of a king, a queen, two rooks (or castles, as they are also called), two bishops, two knights, and eight pawns. The board is placed with the white corner to the right hand of the player, with the pieces arranged in corresponding order on either side. Each player has a king, a queen, two bishops, two knights, and two rooks or castles. To these belong eight pawns, set immediately in front of them. The king and queen occupy the two central squares, her majesty always on her own colour; that is to say, the white queen on a white square, and the black queen on a black square. The bishops stand on either side of the monarchs, and are known as king's bishops, and queen's bishops. As the bishops never pass from white to black squares or *vice versâ*, their relationship to the king and queen is known to the end of the game. Not so, however, with the knights and rooks, which pass indifferently over all the squares on the board. In modern sets, a letter, coronet, or some other distinguishing mark is set on the king's knights and rooks, in order that they may always be known in any part of the game. The knights and rooks are known also as owing allegiance to their respective monarchs, and are called king's rook, queen's knight, queen's rook, and king's knight. The pawns are also distinguished as the servants of the pieces before which they stand—thus: king's pawn, queen's pawn, king's bishop's pawn, queen's bishop's pawn, king's knight's pawn, queen's knight's pawn, king's rook's pawn, and queen's rook's pawn. These distinctions apply equally to black and white pieces and pawns.

All the pieces have their separate moves, and the object of the game is to place your adversary's king in such a position as to render him *hors de combat;* the player who first succeeds in accomplishing that end wins. All the pieces *take* in the direction of their moves, except the pawns; and when they take, they do not, as in draughts, move into the square beyond, but into that occupied by the piece attacked. The captured piece is then removed from the board, and is out of the game altogether.

The Moves and Powers of the Various Pieces.—The King is the most important piece on the board. He moves one square at a time in any direction. He never leaves the board; but when he is in such a position that, were he any other piece, he would be liable to be taken, he is said to be *in check.* He must then either move out of the check, take the opposing piece, or interpose a piece of his own. When he can do none of these things; when, in fact, he is imprisoned, and cannot escape, or offer further resistance, he is *checkmated,* and the game is lost. But when he is in such a position that, without being in check, he cannot move to any square but one commanded by a piece or pawn of his opponent, he is *stalemated,* and the game is drawn. Two kings cannot stand side by side; a vacant square must always be between the opposing monarchs. Once, in each game, however, the king is

allowed to make a jump of two squares. This he does in conjunction with the rook, and the combined move is called *castling*.

The Queen is the most powerful piece on the board; she moves in straight lines and diagonals, up, down, and across the board in any direction, one or more squares at a time, wherever there is a vacant line; thus combining in herself all the moves of the other pieces, except the knight.

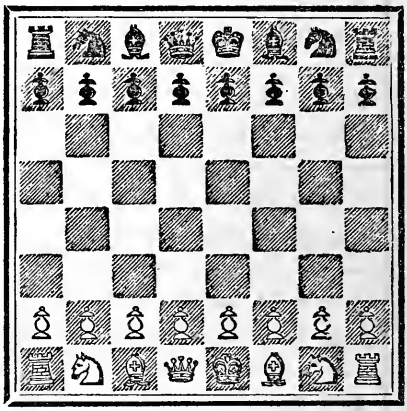
The Rooks (or castles) are next in power to the queen. They move in straight lines—up, down, or across the board—but not in diagonals. There is no limit to the extent of their march, so long as the space is open.

The Bishops move diagonally only, as far as the squares are open. They, therefore, always keep on the same coloured square as that on which they were placed at the commencement of the game.

The Knights move by a sideway forward jump, or *vice versâ*, and can get from their places without the pawn in front having been moved. Thus, from his square on the board, the white king's knight has three squares to which he can move—that in front of the king, that in front of the rook's pawn, or that in front of the bishop's pawn. From either of these squares he can move all over the board. The knight, like the rest of the pieces, takes in the direction of his move. He always moves from one colour to another, and has the power of attacking two pieces at the same moment without putting himself in danger; and also of giving check and at the same time attacking another piece. This power is called *forking*.

The Pawns.—A pawn may, at his *first* move only, advance either one or two squares straight forward; afterwards he can only advance a single square at a time. In capturing an adverse piece, a pawn moves one square diagonally either right or left; but the pawn never moves backward. The pawn is the only man whose mode of taking differs from his ordinary move. On arriving at an eighth square, or the extreme line of the board, a pawn assumes the power of *any piece his owner chooses to call for;* so that a player may have two or more queens, three or more rooks, bishops, or knights on the board at one time. This is called *queening* a pawn. If, on moving two squares, a pawn is placed by the side of an adverse pawn which has arrived at the fifth square, the advanced adverse pawn may take the other in the same manner as if the latter had moved but one square. This is called "taking *en passant*," a power confined to the pawns.

The Chess-board, with the pieces in their proper order:—



Chess Notation.—To enable players to record the moves of the game, the following method of Notation is universally adopted by English and American players. [See next page.]

Each square is called after the name of the piece standing on that square at the commencement of the game; the white king's place is called the king's square (K. sq.), the square in front his second square (K. 2nd), and so on with all the other pieces. The pawns stand severally on the second squares; and in describing the first move of (say) king's pawn, we write, pawn to king's 4th, or pawn to king's 3rd, as the case may be. But instead of writing the word king, queen, rook, pawn, &c., in full, we use only letters. In the diagram above, and in all printed or written notes of games, K. stands for King, Q for Queen, R. for Rook, B. for

BLACK.

K. R. sq.	K. Kt. sq.	K. B. sq.	K. sq.	Q. sq.	Q. B. sq.	Q. Kt. sq.	Q. R. sq.
K. R. 8.	K. Kt. 8.	K. B. 8.	K. 8.	Q. 8.	Q. B. 8.	Q. Kt. 8.	Q. R. 8.
K. R. 2.	K. Kt. 2.	K. B. 2.	K. 2.	Q. 2.	Q. B. 2.	Q. Kt. 2.	Q. R. 2.
K. R. 7.	K. Kt. 7.	K. B. 7.	K. 7.	Q. 7.	Q. B. 7.	Q. Kt. 7.	Q. R. 7.
K. R. 3.	K. Kt. 3.	K. B. 3.	K. 3.	Q. 3.	Q. B. 3.	Q. Kt. 3.	Q. R. 3.
K. R. 6.	K. Kt. 6.	K. B. 6.	K. 6.	Q. 6.	Q. B. 6.	Q. Kt. 6.	Q. R. 6.
K. R. 4.	K. Kt. 4.	K. B. 4.	K. 4.	Q. 4.	Q. B. 4.	Q. Kt. 4.	Q. R. 4.
K. R. 5.	K. Kt. 5.	K. B. 5.	K. 5.	Q. 5.	Q. B. 5.	Q. Kt. 5.	Q. R. 5.
K. R. 4.	K. Kt. 4.	K. B. 4.	K. 4.	Q. 4.	Q. B. 4.	Q. Kt. 4.	Q. R. 4.
K. R. 3.	K. Kt. 3.	K. B. 3.	K. 3.	Q. 3.	Q. B. 3.	Q. Kt. 3.	Q. R. 3.
K. R. 6.	K. Kt. 6.	K. B. 6.	K. 6.	Q. 6.	Q. B. 6.	Q. Kt. 6.	Q. R. 6.
K. R. 5.	K. Kt. 5.	K. B. 5.	K. 5.	Q. 5.	Q. B. 5.	Q. Kt. 5.	Q. R. 5.
K. R. 4.	K. Kt. 4.	K. B. 4.	K. 4.	Q. 4.	Q. B. 4.	Q. Kt. 4.	Q. R. 4.
K. R. 3.	K. Kt. 3.	K. B. 3.	K. 3.	Q. 3.	Q. B. 3.	Q. Kt. 3.	Q. R. 3.
K. R. 6.	K. Kt. 6.	K. B. 6.	K. 6.	Q. 6.	Q. B. 6.	Q. Kt. 6.	Q. R. 6.
K. R. 7.	K. Kt. 7.	K. B. 7.	K. 7.	Q. 7.	Q. B. 7.	Q. Kt. 7.	Q. R. 7.
K. R. 2.	K. Kt. 2.	K. B. 2.	K. 2.	Q. 2.	Q. B. 2.	Q. Kt. 2.	Q. R. 2.
K. R. 8.	K. Kt. 8.	K. B. 8.	K. 8.	Q. 8.	Q. B. 8.	Q. Kt. 8.	Q. R. 8.
K. R. sq.	K. Kt. sq.	K. B. sq.	K. sq.	Q. sq.	Q. B. sq.	Q. Kt. sq.	Q. R. sq.

WHITE.

Bishop, Kt. for Knight, and P. for Pawn.

Technical Terms used in the Game:—

Attack.—When one of your pieces is so situated that, were it your turn to move, you could capture an adverse man, you are said to *attack* such man.

Castling is a compound move of king and castle, in which the castle is brought to the square next the king, and the latter moved to the other side of the castle. This is the only opportunity during the game that the king has of moving two squares at one step. Various conditions attached to this combined move of king and castle are explained in Law XIV.

Check.—When the king is within the range of an adverse piece or pawn, he is said to be *in check;* he must then either move to a square where he will be out of check, interpose a piece or pawn between himself and the attacking piece, or take the latter, either himself or by one of his pieces.

Check by Discovery is given when, by moving a piece or pawn, check is *discovered* from another piece, whose attack was previously masked by the piece now moved.

Checkmate.—If the king, being in check, can neither move, interpose, nor take the attacking piece, he is checkmated, and the game is lost.

Double Check is given when, by moving a piece, check is given by the piece moved, and by the piece whose attack the moved piece covered.

Doubled Pawns are so called when two of the same colour stand on squares on the same file. *Isolated Pawns* are those which stand unsupported by other pawns or pieces. *Passed Pawns* are those whose onward march is not impeded by pawns on the other side.

Drawn Game.—When neither player can win.

En Passant.—To take in passing. When a pawn has advanced to its fifth square, and the opponent, at the first move of his pawn on the next file, on either side, pushes it two squares forward, and so passes the square guarded by your advanced pawn. You can then remove the pawn so moved, and place your own pawn on the square it would have occupied had the opponent's pawn only been moved one square, and you had taken it in the ordinary way. You must do this immediately on your opponent moving, or the privilege is lost.

En Prise.—When a piece or pawn is attacked, and liable to be taken, it is said to be *en prise.*

Forking is a term applied to the move of a knight or pawn when it assails two pieces; as when the knight gives check and by the same move attacks a piece.

Gambit.—A term used to denote the offering of a pawn or piece with the view, should it be taken, of securing a better position.

Perpetual Check is given when a king is in such a position that his opponent insists on attacking him—giving him check at each move—with a piece or pieces so that he cannot escape, although he may have one or more squares in which to take refuge so as to avoid checkmate. The game is then *drawn.*

Stalemate is such a position that the king, not being in check, and having no other piece to move, cannot move without going into check. The game is then drawn.

Superior Pieces are queens and rooks; the *Inferior Pieces* are bishops and knights.

To interpose, or *cover*, is to place a piece between the attacking force and the attacked king or piece.

J'adoube (I adjust) is a term used when you touch a piece or pawn in order to replace it on its proper square. You must not touch a piece or pawn without moving it unless you say *j'adoube* or some similar word.

The king, queen, rooks, bishops, and knights are called *pieces;* the pawns *men.*

The Laws of the Game:—

I. The board is to be placed with a white square to the right hand of each player.

II. If any error have been committed in the placing of the board or men, the game must be recommenced; but either player may claim that the game shall be finished as it stands if four moves have been completed on each side.

III. The players draw for the move in the first game, after which the move is to be taken alternately in the succeeding games of the same sitting.

IV. The player who gives odds is entitled to the first move.

V. A move once made, by your having moved a piece and left hold of it, cannot be retracted.

VI. If you touch a piece, you must play that piece; but as long as you retain your hold, you can play it to any legitimate square. If you touch a piece or pawn that cannot move, your opponent may compel you to play your king, unless the king be unable to move. When you touch a piece for the mere purpose of adjusting it, you are bound to say so, using the French term *j'adoube,* or its English equivalent.

VII. If you make a false move, your opponent may, at his pleasure, either cause you to retract it and move your king, or claim that the false move shall stand, or that you shall make a legal move with the same piece.

VIII. If you touch one of your

opponent's men, he may compel you to take that man; or, if that be impossible, to move your king, provided it can be moved without going into check.

IX. If, on the king being checked, due notice is not given by the word "check," the player whose king is attacked is not bound to notice it; but on the check being afterwards detected, all moves subsequently made must, as far as practicable, be recalled.

X. Drawn games count as no games at all in any match, except by agreement among the players.

XI. The time for consideration of a move is not limited; but a player leaving a game unfinished, without his opponent's permission, loses such game.

XII. When at the end of a game one player is left with sufficient superiority of force to win—as a king and a rook against king, king and two bishops against king, &c.—he who has the greater force must give checkmate within fifty moves on each side, counting from the time notice is given, or the game is drawn.

XIII. Stalemate, and perpetual check if persisted in, constitute drawn games.

XIV. Castling cannot be accomplished under the following circumstances:—If your king has previously moved during the game; if your king is at the moment in check; if your king in castling move into check; if the rook with which your king castles has previously moved; and if either of the squares crossed by the king is commanded by any piece or pawn of your opponent. Castling is only allowed once in a game. The king can castle either with his own or with the queen's rook.

XV. When a player gives the odds of a rook he may castle on that side of the board from which he has taken the rook, provided the rook's square be empty, and he does not otherwise infringe any of the rules for castling, as given in Law XIV.

XVI. If the player touch both king and rook, intending to castle, his adversary may compel him either to move one of the two pieces, or to castle.

XVII. Directly a pawn attains its eighth square it must be exchanged for a queen, rook, bishop, or knight, as the player may choose; but it is not allowed to remain a pawn.

XVIII. No penalty can be enforced for a false move if the other player move subsequent to the false move, and fail to call such false move.

XIX. The saying aloud "check" does not compel the player to give check, unless he have completed the move by quitting his hold of the piece; nor does it compel him to play any piece he has not touched. But if, in consequence of saying "check," the other player moves his king or any other piece, he may retract the move, provided the mistake be detected before another move be made.

XX. The player who undertakes to win any game or position, and succeeds only in drawing the game, loses it.

XXI. The player who gives odds of a piece may remove it from either side of the king; but if he gives a pawn only, he must remove the king's bishop's pawn, unless otherwise stipulated.

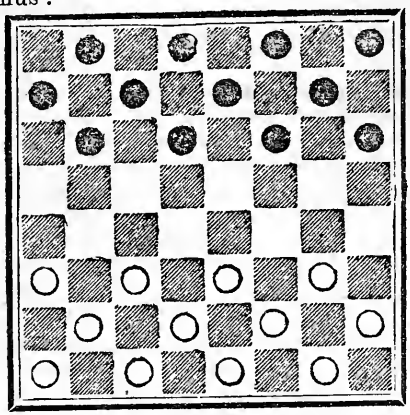
XXII. The player receiving the odds of a certain number of moves must not move beyond his own half of the board.

XXIII. All cases of dispute are to be referred to a third party, whose decision shall be final.

XXIV. Lookers-on are forbidden to comment upon the game.

Draughts.—This favourite game is played by two persons upon the ordinary chess-board of sixty-four squares, alternately black and white. The board is so placed that each player has the two white squares, called the "double-corner," at the right-hand side of his own end. Each player has twelve men; each set of twelve being of different colours, usually black and white; the one player taking the back and the other the white.

These are placed on the board thus :—



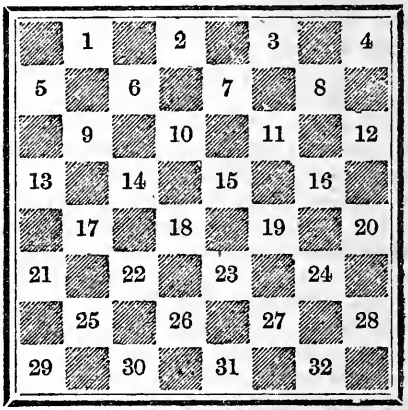
BOARD AND MEN IN ORDER OF PLAY.

The full set of draughtmen consist of fifteen of each colour, the extra men peing provided to crown those which become kings, and to make the set perfect for backgammon.

The board is placed between the players, and the pieces are moved diagonally on the white squares, one square at a time. The first player moves a man one square on his side, and then his opponent moves a man in the same manner—always in a diagonal or slanting direction.

A man can only move one square at a time, except when an adverse man stands in his line of march, with a vacant square beyond, when he jumps over the adverse man to the vacant square ; the man so leapt over being thus captured, and removed from the board. The men all "take" in the direction of their moves, and no move can be made unless the square be empty, or a man can be captured by jumping over him to a vacant square. When two or more adverse men are so placed as to have each a vacant square in the diagonal beyond him, and all in the line of march of the man being moved, the player takes as many men as may be so situated, making a second, third, or even fourth leap, as the case may be, in the same move, or rather series of moves. Each player moves alternately ; and the object of the game is to capture the opponent's men, or to pin them in their several squares so that they cannot move without being taken. He who first succeeds in clearing the board of his adversary's men, or so pinning them, wins the game. The men move forwards, on the diagonals only ; but when the player succeeds in moving a man to the last row of squares on his opponent's side, such man becomes a king, and is crowned — by placing another man of the same colour on top of him. The kings move both backwards and forwards on the diagonals. Either player may make as many kings as he can.

Draught Notation.—For the purpose of recording games the white squares are numbered from one to thirty-two, beginning at the left-hand top corner. A very little study is required to remember the position of the pieces without a numbered board.



THE NUMBERED BOARD.

Laws of Draughts :—

I. The board must be so placed that each player has a white double-corner at his right hand at his own end of the board.

II. The choice of colour and the first move of the game must be determined by lot, after which each player takes the move alternately.

III. Black moves first, and the players change men with each game.

IV. Pointing over the board, or any other action by which the player pre-

vents his adversary from fully seeing the men, is not allowed.

V. The player who touches a man, except for the purpose of adjusting it on its square, must move it. *A man moved over the angle of a square must be moved to that square and no other.*

VI. Any piece *en prise* must be taken; and if it be not taken, the player's opponent may "huff" him by removing from the board the man which should have made the capture, and then playing a man of his own. It is optional with a player either to insist on his opponent taking an offered man, or to allow him to "stand his huff."

VII. Ten minutes is the maximum time allowed for a move; any player exceeding that time before he moves, loses the game.

VIII. The player who quits the game, or leaves the room during its progress without the consent of his opponent, loses it.

IX. When two kings on one side remain opposed to one on the other, the former player may be called upon by his opponent to win the game in twenty moves, or resign it as a draw; the moves to be counted, twenty on each side, from the time of notice.

X. When there remain three kings opposed to two, the player with the weaker force may call upon his opponent to win in forty moves. If he fail, the game is drawn.

XI. With two kings on each side the game is drawn if one or other player fail to win in forty moves, after receiving notice that his moves will be counted.

XII. A player making a false move must either replace the pieces and make a legal move, or resign the game, at the option of his opponent.

XIII. When several pieces are taken at one move, they must none of them be removed from the board till the taking piece has arrived at its final square; and if the player fail to take all the men he can by the move, his opponent may huff him.

XIV. When a man arrives at the last row of squares on his opponent's side he must be immediately crowned; but he cannot move again till his opponent has moved.

XV. All disputes are to be decided by the majority of the company present.

Backgammon. — This game is played by two persons, who have each fifteen men, upon a table specially constructed for the purpose. In beginning the game the men are placed upon the various points (numbered one to twelve, commencing with white at the left hand, and with black at the right hand) thus:—Two men on the ace-point of each side, five on the six-point, three on the eight, and five on the twelve. The two dice are common to both players, but each has his own dice-box, and the throws are taken alternately. The dice are cubes marked with dots from one to six. If a player throw doublets, or two dice of one number, he counts double the number of dots on each die. Thus double-four counts sixteen. The object of the game is for each player to get all his men into his inner table, playing them from point to point according to the throws of the dice, and finally *bearing them*, or moving them off the board. The player who first clears his men off the board wins the game. In throwing, the number upon each die may be reckoned by itself, or added to the number on the other die. Thus, if four be thrown by one die, and six by the other, one man can be advanced four points, and another six points; or a single man can be advanced ten points, always providing a point is open. If doublets are thrown, four men may be moved as many places as there are dots on the dice, instead of one or two, as may be done in the case of ordinary throws. Thus, suppose you throw two deuces, you may move one man eight places, two men four places, or four men two places, always presuming that the road be clear. No man can be moved to a point covered by two of your opponent's men. If such point be covered by only one man—which is called a *blot*—then that man can be hit and be removed from the point, and placed on the bar between the tables, and his place

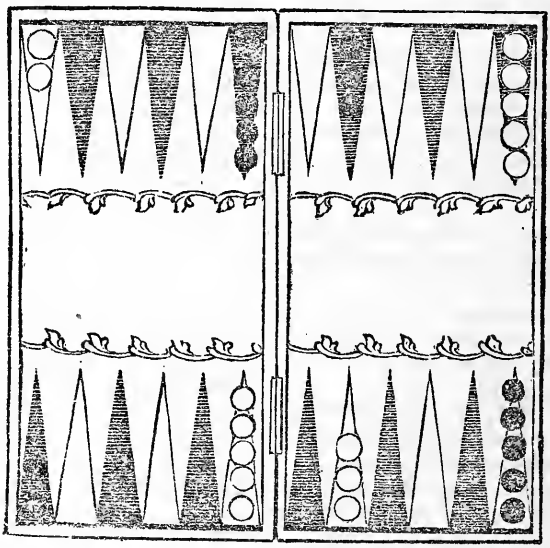
taken by the man that won it. The man on the bar must remain out of play till he is *entered* by a throw of the dice turning up the number corresponding to one open point on the adversary's table; after which he is brought round in the same way as are the others in the set to which he belongs. If, at any time during the game, every point to which you might move is covered by the adversary's men, your men must remain as they were, and the adversary takes his turn; or if only one man can be played you must play it.

There are three kinds of victory—one the winning the *hit*, the second the winning the *gammon*, and the third winning a *backgammon*. The player who has played all the men round into his inner, or home table, and by fortunate throws of the dice has borne or played the men off all the points, wins the *hit*. The *gammon* may be thus explained:—When you have got all your men round to your own table, covering every point, and your adversary has a man out, then you are enabled to *bear* or lift your men away. This you do by throwing the dice and removing men from the points corresponding to the spots on the dice. If you can bear all your men away before your adversary has borne off one man, you win the *gammon*, which is equivalent to two games or hits. But if your adversary is able to bear one of his men before you have borne all yours, then your victory is reduced to a hit. If the winner has borne all his men off before the loser has carried all his men to his own table, it is a *backgammon*, and held equal to three hits or games.

The Backgammon-board, set with the men in order of battle:—

Black's Home, or Inner Table. *Black's Outer Table.*

1 2 3 4 5 6 7 8 9 10 11 12



1 2 3 4 5 6 7 8 9 10 11 12

White's Home, or Inner Table. *White's Outer Table.*

Technical Terms used in the Game:—

Backward Game.—One in which the player has not succeeded in moving so far onward as has his opponent.

Bar. — The division between the inner and outer table.

Bearing your Men is the removing them from your inner or home table, in accordance with the throws of the dice, when they have all been brought round.

Blot.—A single man left on any point.

Carrying your Men is the removing them from point to point by throws of the dice.

Covering your Man is a move by which you cover up a single man, and so prevent your adversary "hitting a blot."

Doublets.—Two dice of equal value, as two fours, two sixes, &c.

Entering your Man is the replacing of your man after he has been hit. No man can be carried forward while another remains to be entered; but, meanwhile, the other player goes on with his game

Forward Game. — One in which the player's men are advantageously moved forward.

Hitting a Blot. — Throwing any number on either of the dice corresponding to the point on which the blot (or single man of your adversary's) is left. The man so hit is taken up and placed on the bar till he can be entered.

Making Points is a term used when a player is rapidly running away from, or gaining on his adversary.

Points.—The several divisions of the tables, as ace-point, the first in the inner table; six, or bar-point, the one next the bar, &c.

The terms, *Men, Table, Gammon,* &c., are already sufficiently explained.

Laws of Backgammon:—

I. If you take a man or men from any point, that man or men must be played.

II. You are not understood to have played any man till you have placed it upon a point and quitted it.

III. If you play with fourteen men only, there is no penalty attending it, because, with a less than the full number, you play to a disadvantage.

IV. If one of two numbers thrown enable a man to enter, the first man must be entered and the second played up to a vacant point; but if more than one man has to enter, and only one number giving the privilege appear on the dice, the latter man must remain on the bar till he can enter.

V. If you bear any number of men before you have entered a man taken up, and which, consequently, you were obliged to enter, such men so borne must be entered again in your adversary's tables, as well as the man taken up.

VI. If you have mistaken your throw, and played it, and your adversary have thrown, it is not in your power or his choice to alter it, unless both parties agree.

Dominoes.—This game is played with a set of wooden, bone, or ivory parallelograms, severally marked from double-blank to double-six, or double-nine. The ordinary set consists of twenty-eight pieces, ranging thus:—Double-blank, blank 1, blank 2, blank 3, blank 4, blank 5, blank 6; 1-1, 1-2, 1-3, 1-4, 1-5, 1-6; 2-2, 2-3, 2-4, 2-5, 2-6; 3-3, 3-4, 3-5, 3-6; 4-4, 4-5, 4-6; 5-5, 5-6; double 6. Larger sets go up to double-nine in the same order of progression.

Whatever particular game of dominoes is played, the plan of the game is first to place the pieces face downwards on the table. Then they are all shuffled about, and each player takes a certain number—say five or seven — from the lot, and arranges them in his hand, or on the table, the edges down, and their backs toward his opponent, and faces to himself.

The object of each player is to get rid of all his dominoes, and he who first succeeds in doing so wins the game. When the player has no domino which corresponds to the spots at either end of the line, he is stopped, and cries "Go!" and his opponent plays again. But if neither player can find a piece, or "stone," as the domino is called, whose spots corre-

spond to those on either end of the line, then the spots on all the dominoes remaining in each hand are counted, and he who holds the smallest number wins the game.

Rules of the Game.—The following general rules are common to all the games with dominoes :—

I. A domino that corresponds with those at either end, when once laid down must be played, and cannot be recalled.

II. An exposed domino must be played at the earliest opportunity.

III. A domino exposed during the process of shuffling must be turned face upward, and remain so till the end of the game.

IV. Each player has a right to shuffle the dominoes.

V. Any player asking and receiving advice from a bystander, without the consent of his opponent, loses the game.

VI. A domino wrongly played, and discovered before two moves have been made, must be removed, and the right stone played; but if three moves have been made before the error is discovered, the stone must stand.

VII. The holder of the highest double in his hand, or the player who picks the highest domino from the pack, has the first *pose*, whether the game be played by two or more persons, after which the *pose* is taken alternatively by each player.

VIII. Any domino played out of its turn must be left exposed on the table till it can be properly played.

IX. The player who abandons the game before all the dominoes on one or the other side are played out loses the game.

The several games may be thus briefly described :—

The English Game. — Take seven each and draw for the first *pose*. He who makes the highest draw goes down, and the game goes on until one makes "domino" (*i.e.*, plays his last stone), or until neither party can play. Then the holder of the fewest *pips* on his cards wins. This game is usually played in "heats" of five games each. Two or more may play singly, or four can play partners.

The Hundred-and-One Game. — Played by two persons, who take seven dominoes each. The possessor of the highest double has the *pose*, and after the first game it is taken alternately. He who plays his dominoes out first wins the game; if both stop—*i.e.*, cannot play to the number—he who has most pips on his stones loses, and his opponent counts the aggregate total towards game—generally 101.

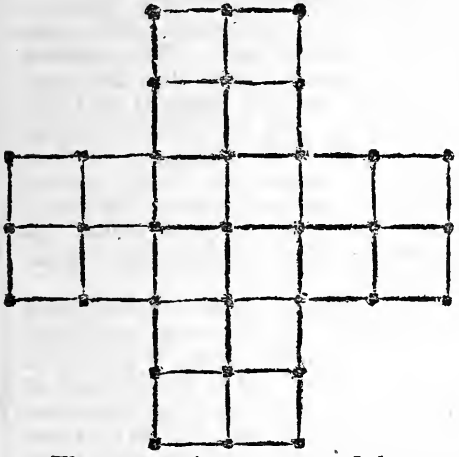
The Drawing Game.—Each player takes three, five, or seven dominoes, and draws for the *pose*. When either player cannot match the domino at either end, he must draw dominoes singly from the pack till he gets one that corresponds with the pips on the stone at one end of the line. Three dominoes must be left on the table; and then, after playing out the hands as far as they can be played by each alternately, the holder of the smaller number of dots wins.

All Fives.—Each player takes five dominoes, and does not draw any more. The object of each is so to play out his stones that the dots at either end count five, or combinations of fives—as ten, fifteen, twenty, &c. When you can count five you score one point toward game, which may be twenty, thirty, fifty, or any other number agreed on. The doubles count in full. Thus, if you have 4-4 at one end, and can play 6-6 at the other, you call "twenty," and score four, because four times five are twenty. The player who gets out first scores one for domino, and one each for the stones his opponent holds. If neither go out, the holder of the fewer number of pips counts one each for all the unplayed dominoes. This game is improved by the players drawing when they cannot play.

All Fours is played on the same principle.

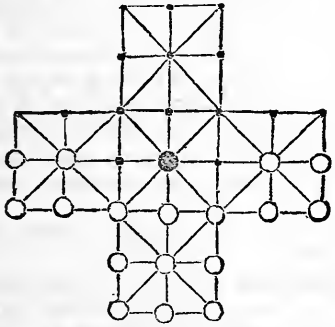
Solitaire is played by one person with a board pierced with thirty-three holes, in all but one of which are placed pegs or marbles. There are thus thirty-two occupied holes

and one empty one, as shown in the following diagram :—



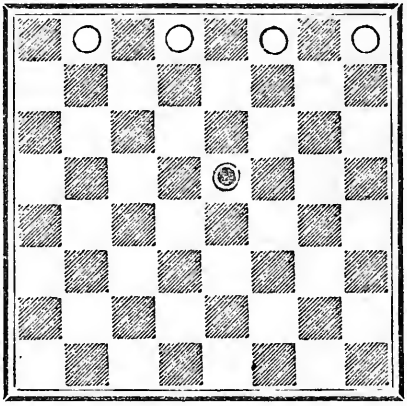
The game is commenced by the player leaving any given hole (the centre one is the best for beginners) open, and then, by passing in a straight line over any other marble into a vacant hole, taking the man that is passed over, as in draughts. The object of the game is to remove from the board all but one marble, which should be left in the hole which was open at the beginning of the game. The marbles can take in any direction, provided there is an open hole the other side of the marble to be taken. Of course a marble must be taken at every move.

Fox and Geese.—This game is played by two persons with eighteen pieces (seventeen geese and one fox), on a board arranged as follows :—



Thus we see the geese occupy the bottom half of the board, and the fox (a larger and differently coloured marble or peg) stands in the middle. If the geese can hem in the fox so that he cannot move, they win ; and the fox, who has the power of taking like a king at draughts, does his best to avoid them. When the geese are reduced to five they cannot block up the fox, and accordingly lose the game.

Another way of playing is on a draught-board, arranged thus :—



Four white draught men here represent the geese, and a black draught king the fox. The geese can here only move forwards, while the fox can move either way, and take as at draughts. Either on the regular board, or on the draught-board, the geese, properly played, should win.

Loto is played by a number of persons with a set of twenty-four numbered cards, a quantity of wooden discs (each of which bears a number corresponding to the figures on the cards), a bag, and counters. On each card are fifteen numbers, ranged in columns ; the units in the first column, the tens in the second, the twenties in the third, and so on up to ninety, the highest number. Each card is divided into three rows, and on each row there are nine squares—five of them numbered and four blank. A dealer is elected, who shuffles the cards, and gives one or more to each player, according to the number taking part in the game. The cards being dealt, he then takes the bag with the numbered discs in it, and calls out the numbers upon them as he rapidly and

separately draws them out. The player who has a corresponding number on his card to that called out immediately covers it with a counter, and he who has all his numbers covered first wins.

Whist.—The regular game of ten points is played by four persons (divided into two parties, each player sitting opposite his partner) with a complete pack of cards, which rank in the following order:—Ace, king, queen, jack, ten, nine, eight, seven, six, five, four, three, and two. The game is commenced by the cards being placed face downwards on the table; each player then selects a card at random, and the two highest become partners against the two lowest. The holder of the lowest card is the first dealer. The cards are shuffled by the elder hand, cut by the younger hand, and dealt out singly by the dealer, beginning with the player on his left, his partner, then the player on his right, and lastly himself. He proceeds in this way until the whole pack, or thirteen cards to each player, is distributed—the last card being the "trump," and left face upwards on the table till the first trick is won. The cards being dealt, each player takes up his hand and arranges it into suits. The elder hand now leads or plays a card. His left-hand adversary follows, then his partner, and lastly his right-hand adversary, the dealer. Each player must "follow suit," if he can, and the highest card of the suit led wins the "trick;" or if either player cannot follow suit, he either passes the suit—that is, plays some card of another suit; or trumps—that is, plays a card of the same suit as the turned-up card. Thus, we will suppose the first player leads the five of hearts, the second follows with the seven, the third, who perhaps holds two high cards, plays the queen, and the last the three. The trick would then belong to the third player, who won it with his queen. The winner of the trick then leads off a card, and the others follow as before, and so on till the thirteen tricks are played. A second deal then takes place as before, and so the game proceeds till one or the other side has obtained ten tricks, which is *game.*

The points are scored thus:—The four court cards (ace, king, queen, and knave) of the trump suit are called *honours;* and the holders of the four score *four* towards the game; the holders of three score *two;* but if each player or each set of partners hold *two,* then honours are said to be *divided,* or equal, and no points are added to the game on either side. Every trick above six scores one towards game; thus it often happens that one side obtains the required ten points in a single deal, by scoring four by honours and six or seven by tricks.

At eight points, the player who holds two honours in his hand has what is called the privilege of *the call.* That is, he may ask his partner if he has an honour—"Can you one?" or "Have you an honour?" If the partner asked does hold the requisite court card, the honours may be shown, the points scored, and the game ended. If he does not hold the required honour the game proceeds. The inquiry must not be made by the player holding the two honours *till it is his turn to play,* nor must the holder of a single honour inquire of his partner if he has two. Nor does the holding of four honours entitle the partners to show them at any stage of the game except at eight points. Thus, at six or seven points, tricks count before honours; at eight points, honours count before tricks.

At nine points honours do not count—the game must be won by tricks only. In order, however, to count honours at eight points, they must be shown before the first trick is turned, or they cannot be claimed till the round is completed. Thus, partners at eight points, holding the honours between them, and neglecting to show them, might be beaten by tricks, even though the other side wanted three or four tricks for the game.

A Single Game is won by the side which first obtains the ten points by a majority of one, two, three, or four points.

A Double Game is made when one

side obtains *ten* points before the other has scored *five*.

A Lurch or Triplet is won by the obtainment of ten points to nothing on the other side.

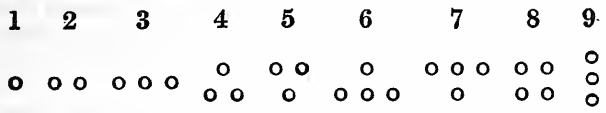
A Rubber is two games won out of three.

The Points of a Rubber are reckoned thuswise :—For the single game, *one* point ; for the double, *two* points ; and for the rub, *two* points. Thus it is possible to obtain *six* points in one rubber—namely, two doubles and the rub. The more usual plan is to play whist for a small stake on each game, without regard to the *points of the game*.

A Lurch or Triplet is sometimes reckoned as three points, but is generally only considered a double game.

A Slam is when the whole thirteen tricks are won in a single hand ; and it is reckoned equal to a full rubber of six points.

The game is usually marked with pegs on the cribbage-board, or by coins on the table thus :—



Technical Terms used in the Game:—

Ace.—Highest in play, lowest in cutting.

Blue Peter.—An allowable signal for trumps. When a high card is *unnecessarily played* in place of one of lower denomination, as a ten for a seven, a five for a deuce, &c.

Cut.—Lifting the cards, when the uppermost portion (not fewer than three) is placed below the rest. The pack is then ready for the dealer.

Cutting-in.—Deciding the deal by each player taking up not fewer than three cards, and the two highest and two lowest become partners. In case of ties, the cards are cut again.

Cutting-out.—In case of other person or persons wishing to play, the cut is adopted as before, when the highest (or lowest, as may be agreed on) stands out of the game, and does not play.

Call, the. — The privilege of the player at eight points asking his partner if he holds an honour—"Have you one?" The partners having eight points are said to *have the call*. When each side stands at eight, the first player has the privilege.

Deal.—The proper distribution of the cards, from left to right, face downwards.

Deal, miss.—A misdeal is made by giving a card too many or too few to either player, in which case the deal passes to the next hand. [*See* Laws.]

Deal, fresh.—A fresh or new deal, rendered necessary by any violation of the laws, or by any accident to the cards or players.

Double.—Ten points scored at long whist before adversaries have obtained five ; or in short whist, five before three.

Elder Hand.—The player to the left of the dealer.

Faced Card.—A card improperly shown in process of dealing. It is in the power of adversaries in such cases to demand a new deal.

Finessing. — A term used when a player endeavours to conceal his strength, as when, having the best and third best (as ace and queen), he plays the latter, and risks his adversary holding the second best (the king). If he succeed in winning with his queen, he gains a clear trick, because, if his adversary throws away on the queen, the ace is certain of making a trick.

Forcing.—This term is employed when the player obliges his adversary or partner to play his trump or pa the trick. As, for instance, when player holds the last two cards i suit, and plays one of them.

Hand.—The thirteen cards deal each player.

Honours.—Ace, king, queen, a knave of trumps.

Jack.—The knave of any suit.

King Card.—The highest unplayed card in any suit; the leading or winning card.

Lead, the.—The first player's card, or the card next played by the winner of the last trick.

Long Trumps. — The last trump card in hand, one or more, when the rest are all played.

Loose Card.—A card of no value, which may be thrown away on any trick won by your partner or adversary.

Longs.—Long whist, as opposed to short.

Lurch.—The players who make the double-point are said to have lurched their adversaries.

Love.—No points to score. Nothing.

Marking the Game.—Making the score apparent.

Opposition.—Side against side.

Points. — The score obtained by tricks and honours.

Quarte.—Four cards in sequence.

Quarte Major.—A sequence of ace, king, queen, and knave.

Quint.—Five successive cards in a suit; a sequence of five, as king, queen, knave, ten, and nine.

Renounce. — Possessing no card of the suit led, and playing another which is not a trump.

Revoke.—Playing a card different from the suit led, though the player can follow suit. The penalty for the error, whether made purposely or by accident, is the forfeiture of three tricks. [*See* Laws.]

Rubber. — The best two of three games.

Ruffing.—Another term for trumping a suit other than trumps.

Sequence.—Cards following in their natural order, as ace, king, queen; two, three, four, &c. There may, therefore, be a sequence of four, five, six, and so on.

Single.—Scoring, at long whist, ten tricks before your adversaries have scored five.

See-saw.—When each partner trumps a suit. For instance, A. holds no diamonds, and B. no hearts. When A. plays hearts, B. trumps and returns a diamond, which A. trumps and returns a heart, and so on.

Score.—The points gained in a game or rubber.

Slam.—Winning every trick in a round.

Shorts.—Short whist as opposed to long.

Tenace.—Holding the best and third best of any suit led when last player. Holding tenace, as king and ten of clubs. When your adversary leads that suit, you win two tricks perforce. [*Tenace Minor* means the second and fourth best of any suit.]

Treble. — Scoring five (at short whist) before your adversaries have marked one.

Terce.—A sequence of three cards in any suit.

Terce Major.—Ace, king, and queen of any suit held in one hand.

Tricks.—The four cards played, including the lead.

Trump.—The last card in the deal; the turn-up.

Trumps.—Cards of the same suit as the turn-up.

Ties.—Cards of like denomination, as two kings, queens, &c. Cards of the same number of pips.

Trumping Suit.—Playing a trump to any other suit led.

Underplay. — Playing to mislead your adversaries; as by leading a small card, though you hold the king card of the suit.

Younger Hand.—The player to the right of the dealer.

The Laws of the Game:—

Cutting-in.

I. The two highest are partners against the two lowest.

[The cutting may be done by throwing the cards out, face downwards, on the table, and each player taking one; or by cutting a few off a close pack.]

II. Less than three cards is not a cut.

[If fewer than three cards be cut, the player must cut again.]

III. In cutting, the ace is lowest.

IV. Ties must cut again.

[It is sufficient if the two holders of like cards (the tie) take a fresh cut, the highest and lowest in the second

cut becoming partners with the highest and lowest in the first.]

V. After the pack is cut, no fresh cards can be called for in that deal.

[This and the following are club rules:—"The cards may be changed as often as any player chooses to pay for them."]

VI. If a card be exposed, a new cut may be demanded.

[Before the pack be played with, see that it contains no faced cards.]

VII. All cutting-in and cutting-out must be by pairs.

[Six persons form a full table; after the first rubber is over, two players retire. Cutting-out determines who shall go out of the game. The two highest retire. The new table cut again for partners.]

VIII. The right-hand adversary cuts to the dealer.

Shuffling.

IX. The cards must be shuffled above the table.

X. Each player has a right to shuffle the cards, the dealer last.

[The following is the plan most usually pursued:—The left-hand adversary shuffles, or "makes" the cards, and the right-hand adversary cuts them, the dealer's partner not interfering with them.]

Dealing.

XI. The cards must be dealt one at a time, commencing with the player to the left of the dealer.

XII. In case of a *misdeal*, the deal passes to the next player.

[*Misdeals* consist of:—A card too many or too few given to either player; an exposed card; looking to the trump card before it is turned up in the regular order of play; dealing the cards with the pack not having been cut; the trump card dropped out of turn; a faulty pack. In every case, except the last, the deal is lost if a fresh deal be claimed by opponents. A card faced by any other than the dealer is not subject to penalty.]

XIII. The dealer must not touch the cards after they have left his hand, but he is allowed to count those remaining undealt if he suspects he has made a misdeal.

[He may ask his partner and his opponents to count their cards, but they may either comply or refuse.]

XIV. The trump card must be left on the table, face upwards, till the first trick is turned.

[If not then taken up, it can be treated as an exposed card.

XV. One partner may not deal for another without the consent of opponents.

The Game.

XVI. Any card played out of turn can be treated as an exposed card and called, provided no revoke be thereby caused.

XVII. If the third player throws down his card before the second, the fourth player has a right also to play before the second; or, if the fourth hand play before the second or third, the cards so played must stand, and the second be compelled to win the trick if he can.

XVIII. No player but he who made the last trick has a right to look at it after it has been turned.

[It is an error to suppose that the winner of the trick has a right to see the last *three tricks*. Eight cards are all that can ever be seen—that is, the last and the current trick.]

XIX. A trump card played in error may be recalled before the trick is turned.

[But if the playing of such trump cause the next player to expose a card, such last exposed card cannot be called.]

XX. If two cards be played, or if the player play twice to the same trick, his opponents can elect which of the two shall remain and belong to the trick. Provided, however, that no revoke be caused.

XXI. A player, before he throws, may require his partner to "draw his card," or he may have each card in the trick claimed by the players before the trick is completed.

XXII. If two players answer the lead together, the one whose turn it was to play can call the other card in the next or following trick as an exposed card.

XXIII. No player is allowed to

transfer his hand to another without the consent of his adversaries.

XXIV. A hand once abandoned and laid down on the table cannot be taken up again and played.

[It is not sufficient, however, for a player to say, "I resign"—he must resign absolutely.]

XXV. If a player announce that he can win every trick, adversaries may call his cards.

The Revoke.

XXVI. The penalty for a revoke is the forfeiture of three tricks. If a revoke be made, the adverse party may add three to their score by taking them from their opponents, or they may reduce your score by three.

[Mr. Carleton says:—"If a suit is led, and any one of the players, having a card of the same suit, shall play another suit to it, that constitutes a revoke. But if the error be discovered before the trick is quitted, or before the party having so played a wrong suit, or his partner, shall play again, the penalty only amounts to the cards being treated as exposed, and being liable to be called."]

XXVII. If a player revokes, and before the trick is turned discovers his error, adversaries may call on him to play his highest or lowest card of the suit led, or they may call the card exposed at any time when such call will not lead to another revoke.

XXVIII. No revoke can be claimed till the trick is turned and quitted, or the revoker's partner has played again.

XXIX. When a revoke is claimed, the cards must not be mixed, under forfeiture of the game.

XXX. The player or partners against whom a revoke is established cannot claim the game in that deal.

[If after taking three tricks, the offending players should have points enough to make up the ten required for the game, they must remain at nine.]

XXXI. No revoke can be claimed after the cards are cut for the next game.

XXXII. When a revoke has occurred on both sides, there must be a new deal.

XXXIII. The proof of a revoke is with the claimants, who may examine each trick on the completion of the round.

Calling Honours.

XXXIV. Honours cannot be counted unless they are claimed before the next deal. No omission to score them can be rectified after the cards are packed, but an overscore can be deducted.

XXXV. Honours can only be called at eight points, and then only by the player whose turn it is to play.

XXXVI. At nine points honours do not count.

XXXVII. Four honours in one or both partners' hands count *four* to the game; three honours *two*. Two honours on each side are not scored, but are said to be *divided*.

The Score.

XXXVIII. If both partners score, and a discrepancy occur between them, adversaries may elect which score to retain.

XXXIX. The score cannot be amended after the game is won, and the cards packed.

Intimations between Partners.

XL. A player may ask his partner, "What are trumps?" or "Can you follow suit?" "Is there not a revoke?" or he may tell him to draw his card. All other intimations are unfair.

XLI. Lookers-on must not interfere unless appealed to.

Bye-laws.

When the trump is taken into the player's hand, it cannot be demanded by either of the players.

When a card is taken distinctly from the hand to which it belongs, it may be treated as an exposed card.

Taking a trick belonging to your adversaries subjects you to no penalty, but it may be reclaimed at any time during the round.

If a player throws up his hand, and the next player follows his example, the game must be considered at an end, and lost to the first player resigning.

Honours scored improperly are in some companies transferred to adversaries.

Approval or disapproval of a partner's play is not allowable.

As soon as the lead is played to, it is complete.

If a player announce that he can win all the remaining tricks, he may be required to face all his cards on the table. His partner's hand may also be so treated, and each card may be called separately.

Bob Short's Rules. — The following maxims are familiar to all whist players. There are of course cases where they do not hold good, but in the great majority of instances you will do right to follow then :—

For First Hand or Lead.

I. Lead from your strong suit, and be cautious how you change suits ; and keep a commanding card to bring it in again.

II. Lead through the strong suit and up to the weak, but not in trumps, unless very strong in them.

III. Lead the highest of a sequence ; but if you have a quart or a quint to a king, lead the lowest.

IV. Lead through an honour, particularly if the game be much against you.

V. Lead your best trump, if the adversaries be eight, and you have no honour ; but not if you have four trumps, unless you have a sequence.

VI. Lead a trump if you have four or five or a strong hand ; but not if weak.

VII. Having ace, king, and two or three small cards, lead ace and king if weak in trumps, but a small one if strong in them.

VIII. If you have the last trump, with some winning cards, and one losing card only, lead the losing card.

IX. Return your partner's lead, not the adversaries' ; and if you have only three originally, play the best ; but you need not return it immediately, when you win with the king, queen, or knave, and have only small ones, or when you hold a good sequence, have a strong suit or have five trumps.

X. Do not lead from ace queen, or ace knave.

XI. Do not lead an ace, unless you have a king.

XII. Do not lead a thirteenth card, unless trumps be out.

XIII. Do not trump a thirteenth card, unless you be last player, or want the lead.

XIV. Keep a small card to return your partner's lead.

XV. Be cautious in trumping a card when strong in trumps, particularly if you have a strong suit.

XVI. Having only a few small trumps, make them when you can.

XVII. If your partner refuses to trump a suit, of which he knows you have not the best, lead your best trump.

XVIII. When you hold all the remaining trumps play one, and then try to put the lead in your partner's hand.

XIX. Remember how many of each suit are out, and what is the best card left in each hand.

XX. Never force your partner if you are weak in trumps, unless you have a renounce, or want the odd trick.

XXI. When playing for the odd trick, be cautious of trumping out, especially if your partner be likely to trump a suit ; make all the tricks you can early, and avoid finessing.

XXII. If you take a trick, and have a sequence, win with the lowest.

For Second Hand.

XXIII. With king, queen, and small cards, play a small one, when not strong in trumps. But if weak, play the king. With ace, king, queen, or knave, only, and a small card, play the small one.

For Third Hand.

XXIV. With ace and queen, play her majesty, and if she wins, return the ace. In all other cases the third hand should play his best card when his partner has led a low one. It is a safe rule for third hand to play his highest.

For All the Players.

XXV. Fail not, when in your power, to make the odd trick.

XXVI. Attend to the game, and play accordingly.

XXVII. Hold the turn-up card as long as possible, and so keep your adversaries from a knowledge of your strength.

XXVIII. Retain a high trump as long as you can.

XXIX. When in doubt win the trick.

XXX. PLAY THE GAME FAIRLY AND KEEP YOUR TEMPER.

Short Whist.—The principles of this variation of whist are precisely the same as in the more general game, and the only differences are that short whist is only five points instead of ten, and that honours cannot be "called" at any period of the game.

Laws of Short Whist:—

I. The game consists of five points. One point scored saves the triple game; three points a double. The rubber is reckoned as two points.

II. Honours cannot be "called" at any part of the game, and do not count at the point of four.

[In other respects, honours are reckoned as in long whist.

III. The two highest and two lowest are partners, the lowest cut having the deal.

IV. An exposed card necessitates a fresh deal.

V. In cases of misdeal, the deal passes to the next player.

[Misdeals occur from the same causes as in long whist.]

VI. No questions as to either hand can be asked after the trick is turned.

VII. Any card played out of turn, or shown accidentally, can be called.

VIII. A revoke is subject to the penalty of three tricks.

[The penalty for a revoke is taken as in long whist.]

IX. The side making the revoke remains at four, in whatever way the penalty be enforced.

X. Lookers-on must not interfere unless appealed to by the players.

Three-handed Whist.—There are two ways of playing this game. In the first one player takes "dumby" (the hand that would belong to his partner at four-handed whist), and lays it in suits face upwards on the table. The game is ten points, and then proceeds as in long whist, the player who takes dumby directing the play of both his own and the exposed hand. Rules, penalties, &c., are the same as in long whist. The second mode of playing is simpler. Each of the three players stands on his own cards. The game is fifteen points; each honour counts one; and all tricks above four count towards game. The fourth hand—that opposite the dealer—is left face downwards on the table, and the elder hand has the option of exchanging his own hand—after he has seen it—for the "miss," as the unseen hand is called. If he decline to change, the younger hand, and lastly the dealer, may take the unseen hand. When the miss has been taken by one of the players, or, as sometimes happens, neither care to change, the game proceeds as before. At thirteen points honours do not count.

Two-handed Whist, or "Double Dumby," is played by two persons, who either play with two exposed or two rejected hands. The game is ten points, and each honour, and each trick above six, counts one.

Cribbage.—The best of the cribbage games is the five-card game for two players. The cards are shuffled, and the players cut for deal—the ace is lowest, and all tens and court cards are ties. The deal determined, the cards are shuffled by the dealer, who then lays them on the table on his opponent's side of the cribbage-board, which is placed between the players. The non-dealer then cuts; and from the top of the undermost half of the pack the dealer distributes five cards each singly, beginning with his adversary. The dealer then places the remaining cards on the other heap, and the pack remains undisturbed till the "crib" cards are discarded. Each player then looks at his hand, and throws out two cards—the non-dealer first. The non-dealer then again cuts the cards by taking up not fewer than three; the dealer lifts the top card of those left on the table, the non-dealer replaces the cards he cut, and the dealer puts the top card, face upward, on the pack. The discarded and the exposed cut card (the turn-up) form what is called the *crib*. The number

scored in the crib belongs always to the dealer, the deal being taken alternately. If a knave happen to be the "turn-up," the dealer takes "two for his heels." The turn-up is reckoned in making up the score of each player's hand, as well as of the crib.

The game then commences. The non-dealer plays a card on his side of the cribbage-board, and calls out its value. Thus, suppose the non-dealer to hold a king, knave, and a five; and the dealer a seven, knave, and eight; and that a four has been turned up. The non-dealer plays (say) the knave, and calls "Ten;" the dealer replies by playing his knave and cries "Twenty," and takes two for the pair; his opponent then plays his king and says "Thirty." This being the nearest point to thirty-one, and the dealer, having no ace in his hand, cries "Go," when his adversary scores one hole on the board. Each player's hand is then counted; the elder scoring four—two for each fifteen; and the dealer two for the seven and eight, which make fifteen. But if the knave in either hand be of the same suit as the turn-up, the holder of such knave scores "one for his nob." The crib is then counted, and the points in it taken by the dealer, and the game proceeds as before. The deal is taken alternately. For the "go" a single hole is scored, except when exactly thirty-one is made, when two holes are scored by the player whose last card makes that number. The cards are then laid face upwards on the table and counted—the non-dealer taking first, and the dealer afterwards taking his hand, and lastly his "crib." The cards are reckoned thus:—Two points for every fifteen, as ten and five; nine and six; three, four, and eight, &c: one point for every card in a sequence of three or more, as five, six, seven; or eight, nine, ten, knave: three points for a "flush" in hand—that is, the whole three cards of one suit: four points for a full flush in hand—that is, when the turn-up and the hand are all of one suit: five points for a flush in crib—that is, when all the five cards are of one suit (a flush in crib cannot be counted unless the turn-up is of the same suit as the four cards): two points for every pair, as two kings, two nines, two fives, &c.: six points for every pair-royal, as three queens, three sevens, &c.: twelve points for every double pair-royal, as four kings, fours, &c.; and one point for holding the knave of the turn-up suit, called "one for his nob." Sequences count double when in the four cards there are two of a sort; thus, suppose the hand consisted of two, three, and four, and there was another four turned up, the score would be eight—six for the double "run" or sequence, and two for the pair of fours. The non-dealer takes three points at the commencement of each game, as an equivalent to the dealer's extra crib. The game is once round the cribbage-board, and whoever arrives at the end-hole first wins the game.

Technical Terms used in Cribbage:—

Crib.—The two cards thrown from the hand of each player. These, with the turn-up, form the dealer's crib.

Fifteens.—Every two, three, or more cards which, added together, make fifteen, reckon two holes towards game, whether the combination is in hand, crib, or play. Fifteens are formed of court cards and fives, tens and fives, nines and sixes, eights and sevens, and by three or four cards added together. This counting two for every combination of cards making fifteen is common to all games at cribbage.

Pairs.—Two cards of a sort, as two kings, two aces, &c.

Pairs-Royal.—Three cards of a sort, as three fives, three eights, &c.

Double Pairs-Royal.—Four cards of a sort, as four threes, four sevens, &c.

Sequences.—Three or more cards in consecutive order, as six, seven, eight; ace, deuce, three, four.

Flush.—All the cards in the hand being of one suit. Unless the turn-up card is of the same suit as the four crib cards, no flush can be counted in the crib.

His Nob.—One point counted by the possessor, in hand or crib, of the knave of the turn-up suit.

His Heels.—Two points counted by

the dealer whenever he turns up a knave on the pack.

End Hole.—The last hole on the board, into which the player places his peg when he makes game.

Pegging. — Scoring the game by means of the pegs on the cribbage-board. [Also, see Law V.]

The Go.—The point nearest thirty-one.

Last.—The one hole taken by the holder of the last card at *six-card cribbage*.

Rules of the Five-Card Game:—

I. The players cut for deal, the holder of the lowest card being dealer. The ace is lowest, and all ties cut again. All tenth cards—kings, queens, knaves, and tens—are ties.

II. Faced cards necessitate a new deal, if called for by the non-dealer.

III. Should too many cards be dealt to either, the non-dealer may score two, and demand another deal, if the error be detected previous to his taking up his cards; if he do not wish a new deal, the top or last-dealt cards may be withdrawn and packed. When any player has more than the proper number of cards in hand, the opponent may score four, and call a new deal.

[This is seldom enforced, a new deal following any misdeal.]

IV. If a player touch the pack after dealing, till the period of cutting it for the turn-up card, his opponent may score two points.

V. If a player take more than he is entitled to, the other party not only puts him back as many points as are overscored, but likewise takes the same extra number for his own game.

[This is called "pegging." If your opponent has taken too many holes, the proper way to rectify the error is to take your back peg and place it in the hole his front peg should have properly occupied. Then remove his front peg, and make it your front peg by adding as many to your score as he has wrongfully taken. If in pegging him you remove his or your own front peg first, he may claim to have the pegs as they were; or if you peg him wrongly, he is entitled to score all the holes he formerly marked, and your error in addition.]

VI. Should either player even meddle with his own pegs unnecessarily, the opponent may score two points; and if either take out his front peg, he must place the same back behind the other. If any peg be misplaced by accident, a bystander may replace it, according to the best of his judgment; but the bystander should never otherwise interfere unless requested by the players.

VII. If any player neglect to set up what he is entitled to, he loses the points so omitted to be taken, but his adversary cannot add them to his own score.

VIII. Each player may place his own cards, when the deal is concluded, upon the pack.

IX. The cards are to be dealt one by one.

X. The non-dealer, at the commencement of the game in five-card cribbage, scores three points, called *three for last;* but in six and eight-card cribbage this is not to be done.

XI. After the score is taken on the board the pegs must not be replaced, if a mistake be perceived, without the consent of the opponent.

XII. Neither player is allowed to touch his adversary's pegs, under penalty of losing his game, except it be to peg him for a wrong score.

XIII. All cases of dispute must be decided by appeal to the bystanders.

XIV. Three cards at least must be removed from the pack in cutting for deal or turn-up.

XV. When the knave is turned up, "two for his heels" must be taken before a card is played, or the two cannot be scored.

XVI. The non-dealer discards for the crib first, and a card once laid out cannot be recalled if it be covered.

XVII. Neither player may touch the crib cards till the hand is played out.

[It is usual to throw the crib cards over to the dealer's side of the board, thus indicating whose deal it is. The pack is placed on the side of the non-dealer.]

XVIII. The dealer shuffles the cards, and the non-dealer cuts them. In four-handed cribbage the left-hand adversary shuffles, and the right-hand cuts.

Three or Four-handed Cribbage.—Three-handed crib is played by three persons, each standing on his own hand. Five cards each are dealt, and one in the middle of the table. This one, and one each from the players, makes up the dealer's crib. All the cards are played out in this game, as in the six-card game, thus:—The eldest hand leads, the others follow in their order, and when thirty-one (or as nearly as either of them can go to thirty-one) has been made, the cards played are turned down, and the player on the left of him who made the go leads again; and so on till all the cards are played. The hands are then taken, the crib last. The deal then passes on, and the game proceeds until one of the players arrives at the end hole. A triangular board is used for this game. Four-handed cribbage is simply the five-card game played by four persons, partners as in whist. This game is usually played twice round the board. The cards are all played out, as in the three-handed game. The rules of five-card crib govern both the above games.

Six-card Cribbage varies from the five-card game, inasmuch as no points are taken for non-deal; four cards are retained by each player; and all the cards are played out, as at three and four-handed crib. As large hands are often held at this game, it is common to play twice round the cribbage-board.

Ecarte is played by two persons with a pack of thirty-two cards—the twos, threes, fours, fives, and sixes being discarded. The game consists of five points. The king is the superior card; then the queen, knave, ace, ten, nine, eight, and seven. The ace is thus the lowest of the court cards. The cards are dealt three at a time to each player, and then two. The eleventh card is turned up on the pack, and forms the trump. If the trump happen to be a king of any suit, the dealer takes one point, and exclaims, "I mark king." The markers are usually a two and a three from the discarded suits. The king cannot be marked if not declared before the first trick is played. The non-dealer may claim to exchange any or all of his cards. If he wish to exchange he says, "I propose." If the dealer accept he asks, "How many?" If the latter refuse, the game proceeds. It is usual to employ French phrases at ecarte. Thus, the player who discards says, "*J'écarte;*" or when he proposes, "*Je propose.*" If the dealer refuse to exchange any cards, the non-dealer scores double for the tricks he may make, except in the case of marking king. The game consists of five points, the highest card of the suit led winning the trick. *Three* tricks must be obtained in order to score *one point; five* tricks to score *two* points. Immediately the king be discovered in the hand of either player it must be declared—"I mark king." Only one discard is allowed.

The game is then played thus:—The non-dealer leads a card, which the dealer may head if he can. The second player must follow suit if he has a card of the suit led. If not, he may either trump or pass the trick. Having won a trick the leader plays another card, and so on till the tricks are played out. The game is usually played in rubbers—the best two games out of three, or the best three out of five, as may be determined at the commencement. To decide the deal the cards are cut at the commencement of each game; the highest card deals, the ace being lowest in cutting. Ties cut again. Each player takes the deal in turn. The dealer shuffles the cards, and the non-dealer cuts them.

Technical Terms used in the Game:—

A tout.—Trump.

Couper.—To cut.

Donner.—To deal.

Ecart.—The cards thrown aside.

La Vole.—To make all the five tricks.

Je Propose.—"I ask to exchange cards."

All Fours is played by two or four persons with a full pack of fifty-two cards, which take rank as at whist. The points are usually nine or eleven.

The players cut for deal, the lowest card having it. Ties cut again. The dealer then gives six cards to each, one at a time, and turns up the thirteenth, if there be two players, and the twenty-fifth if there be four, for trumps. The non-dealer then looks over his hand, and either holds it for play or "begs." If the knave turns up it belongs to the dealer, who scores one for it; but if it be taken in play by a higher card, the point is scored by the winner. The non-dealer having decided on his hand (you can only beg once) he plays a card of any suit. Then the dealer plays to this, and if it be higher he wins the trick, and plays another card; and so on throughout the six tricks. The second player must, if he can, head the trick with one of the same suit or a trump. When the whole of the tricks are played out, the points are taken for high, low, jack, or game, as the case may be. Thus one player may score a point for *high* and the other for *low;* the greatest number, counting on the court cards, aces, and tens in each hand, reckoning for game. The winning the knave, the making the tens, and the taking your adversary's best cards, constitute the science of the game. The hand in which the knave of trumps is eventually found is the one which scores the point for the jack. The *high* and the *low* always belong to the original possessor of those trumps.

Technical Terms used in the Game:—

High.—The highest trump out; the holder scores one point.

Low.—The lowest trump out; the *original* holder scores one point.

Jack.—The knave of trumps. The holder scores one point. If it be won by his adversary, the winner scores the point.

Game.—The greatest number that, in the trick gained, can be shown by either party; reckoning for each ace *four* towards game, for each king *three,* for each queen *two,* for each knave *one,* and for each ten *ten.* The other cards do not count towards game. If neither party have any to score for game, or in case of ties, the non-dealer scores the point for game.

Begging is when the elder hand, disliking his cards, says, "I beg;" the dealer must either let him take one point, saying, "Take one," or give each three cards more from the pack, and then turn up the next card, the seventh, for trumps. If the trump turned up be of the same suit as the first, the dealer must go on, giving each three cards more, and turning up the seventh, until a change takes place in the trump suit.

Laws of All Fours.—I. A new deal can be demanded if in dealing an opponent's card is faced, or if the dealer in any way discover any of his adversary's cards; or if, to either party, too few or too many cards have been dealt. In either case it is optional with the players to have a new deal, provided no card has been played, but not afterwards.

II. If the dealer expose any of his own cards, the deal stands good.

III. No player can beg more than once in each hand, except by previous mutual agreement.

IV. Each player must trump or follow suit if he can, on penalty of his adversary scoring one point.

V. If either player score wrongly the score must be taken down, and the adversary shall either score four points or one, as previously agreed.

VI. When a trump be played, it is allowable to ask the adversary if it be either high or low.

VII. One card may count all fours; for example, the eldest hand holds the knave, and stands his game; the dealer having neither trump, ten, ace, nor court card, it will follow that the jack of trumps will be both high, low, jack, and game.

Blind All Fours.—Played by two persons with a pack of cards from which the sixes and sevens have been discarded. Each player has six cards, and the first one played by the non-

dealer is the trump. There is no begging, and the points are usually seven or nine. Sometimes all the pips on the cards are counted towards game.

All Fives.—This game is played with an entire pack, on the same plan as all fours. The game is sixty-one points, which are marked on a cribbage-board. For ace of trumps the holder marks *four* points when he plays it; for king of trumps *three;* for queen *two;* for knave *one;* for the five of trumps *five;* and for the ten of trumps *ten.* If the knave, ten, or five be taken in play, the points belonging to them are scored by the winner. In counting for game the five of trumps is reckoned as five, and all the other aces, kings, queens, knaves, and tens are counted as in all fours. Trump after trick is not compulsory unless previously agreed to. The first card played by the non-dealer is the trump. The rest of the rules are the same as in all fours. It may be played by four persons, either as partners or singly.

Loo is played in two ways, with three or with five cards. In the *five-card game,* or "pam" loo, after five cards have been dealt to each player, another is turned up for trump; the knave of clubs generally, or sometimes the knave of the trump suit, as agreed upon, is the highest card, and is styled *pam;* the ace of trumps is next in value; and the rest in their whist order. Each player may change any of his cards for others from the pack, or throw up the hand, in order to escape being looed. They who play, either with or without changing, and do not gain a trick, are *looed;* as is likewise the case with all who have stood the game, when a flush or flushes occur; and each, excepting any player holding *pam* of any inferior flush, is required to deposit a stake, to be given to the person who sweeps the board, or is divided among the winners at the ensuing deal, according to the number of tricks made by each. Five cards of a suit, or four with *pam,* compose a flush, which sweeps the board, and yields only to a superior flush, or the elder hand. When the ace of trumps is led, it is usual to say, "*Pam be civil;*" the holder of which last-mentioned card is then expected to let the ace pass.—*Three-card Loo* is played by any number of persons—say seven. There is no "pam," and the highest card in each trick wins it. A "miss" (*i.e.*, an extra hand) is dealt, and the elder player (on the dealer's immediate left) may exchange for his own; or, if he "passes the miss," it may be taken by the next player, and so on round the table. The first player on the left of the dealer looks at his hand, and either decides to play his own cards, take the miss, or throw up his hand. The next player does likewise, and so on till it is decided how many "stand." The elder player then throws down a card and the next follows, either by playing a superior card or a trump, it being *imperative* that he must head the trick if he can; and so the game goes on till all the hands are played out, when the pool is divided into three portions and paid to the holders of the several tricks, all those who have failed to win a trick being looed. The first round of a game is *a single,* when all must play. The amount of the stake is determined on previous to the commencement of the game; but in *unlimited loo* each player is looed the whole amount in the pool till the occurrence of *a single.* Sometimes the rule of *club-law* is introduced, when all must play when a club happens to be turned up.

Laws of Loo.—I. The cards are dealt over at any time, the deal being determined by cutting, the lowest card cut being dealer.

II. The dealer is looed for a misdeal.

III. For playing out of turn, or looking at the miss without taking it, player is looed.

IV. If the first player possess two or three trumps, he must play the highest.

V. With ace of trumps only, the first player must lead it.

VI. No player may look at his own cards or the miss out of his turn.

VII. No player may look at his neighbour's hand, either during the play or when they lie on the table.

VIII. No player may inform another what cards he possesses, or give any intimation as to any card in hand or miss.

IX. If a player throw up his cards after the leading card is played, he is looed.

X. Each player must head the trick if he can, either by a superior card in the same suit or by a trump.

XI. The penalty in each case of disobedience to the laws is the being looed in the sum agreed on at the beginning of the game.

Vingt-et-un (twenty-one) may be played by two or more players; about six or eight is the best number. The cards bear the same respective values as in cribbage. The tens and court cards are each reckoned for ten; but *the ace in each suit may be valued as one or eleven*, at the option of the holder, according to the exigencies of his hand.

Having determined the deal by giving each player a card—the first possessor of the knave having the deal—counters or other stakes having been determined on, the dealer holds the pack with their faces downwards, and proceeds to give a single card to each player, and one to himself, all face downwards. Each player then places a stake on his card, and the dealer distributes a second card all round, beginning in each case with his left-hand neighbour. The players then examine their hands, and the dealer looks at his own two cards. The dealer asks each one in succession if he wishes to have another card, or stand on the two he has. The usual phrase is, "Do you stand?" If the elder hand is content with his hand, he says "Content," and places his cards on the table, face downwards. If he want one or more cards he says so, and the dealer gives him from the top of the pack as many as he requires. If the cards exceed twenty-one in number when added together, the player is said to have "overdrawn," in which case he must throw up his cards and deliver his stake to the dealer. But if the pips and tens on all his cards make, when added up, twenty-one or less, he puts them, face downwards, on the table; and so with each player. The dealer then lays his own cards, face upwards, on the table. He, too, may take other cards from the pack, should the number be not near enough to twenty-one to allow him to stand. When he is satisfied with his hand he says, "I stand," and all the players face their cards on the table. To all those whose hands are twenty-one or nearer to twenty-one than his own, he pays a stake equal to that originally placed on the single card; and by the same rule he receives the stakes from all whose hands are less in number than his own, *including ties*. But to any player or players having an ace and a tenth card—which is termed a "natural vingt-un"—he pays double stakes. The "natural" must always consist of the two cards first dealt. Should, however, the dealer himself have a "natural," he receives double stakes from all the players, and single from the ties. In this way the deal goes on till one of the players turns up a "natural," when he becomes dealer, and proceeds as before.

Rules of Vingt-et-un.—I. The first deal must be determined by chance—as by cutting the cards, obtaining the first knave, &c.

II. Previous to the deal the youngest hand shuffles, and the eldest hand cuts.

III. The stake must be placed on the first card previous to the second round, and allowed to remain till the round is completed and the dealer exposes his cards.

IV. In case of a misdeal, the stakes must be withdrawn and the cards dealt over again.

V. All ties pay to the dealer except in the case of a "natural" being declared previous to the dealer obtaining his second card. Then the holder of the "natural" is entitled to receive double stakes immediately, before another card is played.

VI. The holder of a "natural," after the first round, is entitled to the deal.

VII. The dealer is at any time allowed to sell, and any player to purchase, the deal. The dealer may also

pass the deal to any one desirous of having it.

VIII. The "natural" must consist only of an ace and a tenth card *dealt in the first two rounds.* In the case of double or treble hands, an ace and a tenth card form "acquired" and not "natural" vingt-uns, and receive or pay only single stakes.

IX. The player who overdraws must immediately declare the fact, and pay his stake to the dealer.

X. In taking brulet the dealer is compelled to retain those two cards, but he may add to them if he wishes after all the players are served.

XI. No stake can be withdrawn, added to, or lessened, after it has been once laid on the card; but it must be allowed to remain till the dealer declares he stands.

XII. No stake higher than that agreed to at the commencement of the game is allowed.

Speculation is played with a perfect pack, the cards ranking as at whist. Three cards are dealt singly, face downwards, to each player, and the last card, after all have their three, is turned up for trumps, and is the property of the dealer. The highest trump clears the pool. Previous to the deal the dealer stakes six, and each player three pence or counters; and the holder of every knave and five of each suit except trumps pays one penny or counter to the pool. When the deal is completed, the eldest hand turns up his top card, and if it happen not to be a trump, the next player exposes his top card, and so on till a trump superior in value to the turn-up is shown. When a trump appears, its holder offers to sell, and the various players bid for it, and it then becomes the property of its purchaser, and the player next him to the left turns up, and so on till a better trump is shown, which its owner again offers and sells if he pleases; the holder of the highest trump in the round, whether held by purchase or in hand, winning the entire pool. The holder of the trump card has always the privilege of concealing his hand till a superior trump appears, or of selling either hand or trump. No person looking at his card out of turn can be allowed to take the pool, even if he hold the best trump.

Bezique.—This newly-introduced game is played by two persons with two packs of cards, from which—as in ecarté—the twos, threes, fours, fives, and sixes are omitted.

The mode of play is as follows:—The cards are shuffled, both packs together, and the players cut for deal. The lowest card cut wins the deal. In play the cards are reckoned in the following order: — Ace, ten, king, queen, nine, eight, seven. The deal being determined, eight cards are given alternately to each player, as in cribbage, and the seventeenth card is turned up for trumps. The non-dealer plays first by leading with any card in his hand, to which the other replies. If he win or trump it, he has to lead; in every case the winner of the trick having the next lead. Before playing, however, each player draws a card from the pack—the winner of the last trick drawing the top card, the other player taking the rest; by which means the cards in each hand are restored to their original number—eight. By this process of alternate drawing and playing a card the stock is at length exhausted. In playing, the highest card of the same suit wins the trick. In the case of ties, the leader wins. Trumps win other suits. The tricks are left face upward on the table till the end of the lead; they are of no value but for the aces and tens they contain. The objects of the play are to win aces and tens, and promote in the hand various combinations of cards which, when "declared," score a certain number of points.

Declaring.—A declaration can be made only immediately after winning a trick, and before drawing a card from the pack. It is done by placing the declared cards face upward on the table. Players are not obliged to declare unless they like. A card cannot be played to a trick and declared at the same time. Only one combination can be declared to one trick. In declaring fresh combinations, one ca

more cards of the fresh combination must proceed from the part of the hand held up. The same card can be declared more than once, provided the combination in which it afterwards appears is of a different class. The player scoring the last trick can, at the same time, declare anything in his hand, after which all declarations cease.

Variations in the Game.—It may be played by three or by four persons. If by three, they all play against each other, and three packs of cards are used.

Number of Packs.—If four play, four packs are used, shuffled together; but this is considered as being very complicated.

Diminished Scores.—Some players consider the double bezique and sequence scores as too high, and therefore make the score for the former 300, and for the latter 200.

The Last Trick.—This is sometimes understood to mean the thirty-second trick, or last of all. This, however, is supposed to be an error arising from incorrect nomenclature.

Aces and Tens.—These are sometimes not scored till the end of the hand.

Scoring.—The score may be kept with a bezique-board and pegs, or by a numbered dial and hand, or by means of counters—which last method is the best.

Hints to Learners.—The following hints may be of use in solving one of the chief difficulties—that of deciding what cards to retain and what to throw away:—1. It is no advantage to get the lead unless you have something to declare. 2. The cards that can, without loss, be parted with, are sevens, eights, and nines. 3. After these the least injurious cards to part with are knaves. 4. In difficulties it is better to lead a ten or an ace as a rule, than a king or queen; but to the rule there are several exceptions. 5. It is seldom advisable to go for four aces unless you happen to hold three, and are in no difficulty. 6. If driven to lead an ace or a ten, and your adversary does not take the trick, it is often good play to lead another next time. 7. Do not part with small trumps if it can be helped. 8. Do not part with trump sequence cards. 9. Until near the end do not part with bezique cards, even after declaring bezique. 10. Having a choice between playing a possible scoring card or a small trump, or a card you have declared, play the declared card so as not to expose your hand. 11. Avoid showing your adversary by what you declare, so that he shall not be able to make the trump sequence or double bezique. 12. Whenever your adversary leads a card of a suit of which you hold the ten, take the trick with the ten. 13. Win the last trick if possible. 14. In playing the last eight tricks your object should be to save your aces or tens, and win those of your adversary.

Rules for bezique are sold with the cards, but they differ somewhat. The main points of the game are, however, here given as described by Cavendish, the well-known writer on whist.

Drole is played with two packs of cards, from which all up to the seven are discarded. It is played by two persons thus:—After deciding the deal by cutting, the dealer gives five cards to each, and puts the rest of the pack aside. The value of the cards is:—King, queen, knave, ace, ten, nine, eight, seven, as in ecarté; but there are no trumps. The eldest hand plays a card on any division of the board, which is divided into sections. A card played in its own suit can be won only by a superior card of that suit. If played on a suit that is not its own, it can be won by a superior card of either of the other suits; but a card placed on the line dividing two suits, neither being its own, can be won by a superior card of its own suit, or of either of the two played upon; and a card played over the place where four suits join—that is, on all four suits—can be won by a superior card of any of them. The tricks count according to the number of suits played on. Each player plays to the card led, and must follow suit or win the trick.

The king of hearts, led or played, wins every other card in that suit, except the queen of hearts, queen of spades, knave of diamonds, and the four aces—severally known as Emperor, Empress, Beautiful Nell, Jack Drole, and the Four Beggars. When two persons play, twenty-three is game; if more than two, seventeen. Jack Drole has the power of robbing in any suit—*i.e.*, sending back the player who wins the trick as many points as he would have scored. The player of drole cannot win the trick; he merely sends back the winner, but he takes the next lead. If Jack Drole is led to a trick he has only the same power as an ordinary knave, and may win or be won.

The Four Beggars (*the Aces*). — When a trick containing an ace scores more than two, the player of the ace *begs*—namely, gets part of the score from the winner. In a trick scoring three or four the ace gets one, and the winner the remainder. In a six or eight-trick the ace gets two, the winner the remainder. If a trick is robbed the ace goes back in the same proportion, and the winner goes back the remainder. When two aces are in a trick the second ace gets nothing. There is no begging in a trick which is won by an ace; in a trick which wins the game; nor in a trick to which Nell is played. An ace may be played to any suit.

Laws of Drole.—1. The lowest card deals. 2. The player to the dealer's right cuts. 3. If the dealer gives any player more or less than five cards, and the player declares it, there must be a fresh deal, and the dealer goes back four points. 4. If the dealer deals himself less than five cards, he may complete his hand from the stock before playing to the first trick, and is then not liable to any penalty. 5. If a player has more or less than five cards dealt him, and fails to declare it before the first trick, he goes back four points, and can score nothing that hand. 6. If a card is exposed in dealing, there must be a fresh deal. 7. If there is a card faced in the pack, there must be a fresh deal. 8. If a player deals out of his turn, the error may be rectified before the deal is complete.

XI. DOMESTIC PETS.

Dogs.—*Their Management.*—All dogs require clean, warm, but well-ventilated beds, pure water, and plain, fresh food. If your dog does not have sufficient exercise, give him now and then a tea-spoonful of flower of sulphur mixed with his food. When his nose is cold and wet he is generally in good health, and *vice versâ*. The more common diseases, and their mode of treatment, are given below.

Fits.—Often caused in young dogs by over-feeding; give a spare but nourishing diet, and plenty of exercise.

Distemper.—Nearly every dog has this disease once, and usually between his fourth and tenth months. Mr. Johnson, a practical writer on the subject, says:—"On the approach of this canine scourge the dog will be dull, his eyes will appear less bright than usual, a languidness will pervade his whole system, and his appetite will fail, or he may perhaps refuse his food altogether; he will be also troubled with a great degree of constipation—this is the first stage of the disease in question. The distemper makes its way by inflammation, accompanied by costiveness; and, therefore, reason clearly points out the necessity of checking the one and removing the other. Bleed the animal immediately, and give him a table-spoonful of syrup of buckthorn, which will most likely answer the purpose effectually; if, after the lapse of a few days, the dog does not appear perfectly recovered, repeat the bleeding and the physic; a third time if found necessary, which will not often happen—not once in five hundred cases. By the process above described the disease is checked and subdued in the first instance, and as it cannot, when thus opposed, acquire strength, is therefore easily vanquished or dissipated. Such a mode of treatment is incontestably supported by reason, since nothing can tend so effectually to check inflammation as lowering the system. The animal should be bled very freely—in fact, it is almost impossible to take too much blood from a dog under these circumstances. Supposing the subject to be a stout pointer whelp, seven or eight months old, about five ounces of blood should be taken from him. A table-spoonful of syrup of buckthorn will be found a proper dose for such an animal, and the quantity may be varied according to the age and strength of the patient. The operation of bleeding a dog should be thus performed:—Place a cord round the animal's neck, and draw it sufficiently tight so as to throw up or elevate the jugular vein; puncture it longitudinally (not cross-wise) with a common lancet, and, for the purpose of causing the blood to flow, the finger should be pressed on the vein a little below the orifice. When sufficient blood has been drawn, the puncture need not be pinned, nor in any way be closed, as the dog, by holding down his head, draws the lips of the wound together, and the blood forms a crust upon it immediately; hence the reason of puncturing the vein longitudinally, since, if cut cross-wise, the dog will pull the wound open every time he holds down his head, particularly in feeding." For small pet dogs a milder cure is Dr. James' powders, given in milk, water, or jam.

Colds.—Keep the dog warm and clean, and administer a purgative.

To destroy Fleas.—Wash and rinse well in strong tobacco water, taking care to avoid the eyes.

Mange.—The common mange is brought on by damp, dirt, and bad or unwholesome food. It is very con-

NEWFOUNDLAND.

SETTER.

SKYE TERRIER.

SHEPHERD'S DOG.

STAG HOUND.

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tagious, but easy of cure. Rub well in (with your gloved hand) an ointment made of equal proportions of sulphur vivam, oil of tar, and train oil. Repeat the process every two or three days until well. The dog must not be permitted to lick himself while he has this disease. An occasional dose of flowers of sulphur may be given with his food. The *red mange* is incurable —destroy the dog.

In giving a dog a powder or pill, put it in a piece of meat; he will swallow it without suspecting you. To give him liquid physic, take the dog between the knees, and, when some other person has the dose ready, open his mouth quietly but *firmly*, keeping the tongue down, speaking kindly to the dog meanwhile; then let a *little* of the physic be poured into his mouth, which you immediately close, *as dogs can't swallow with their mouths open.* Repeat this operation with firmness, but as little fuss as possible *and no punishment*, until all the dose is taken.

The best food for small dogs is the meat biscuits, supplemented by any scraps or pieces. Larger dogs may want "paunch" — which must be boiled—and other animal food; but don't give him the disgusting stuff called and hawked about the streets as "dogs' meat."

Cats.—Few persons are aware that there are several distinct varieties of the domestic cat—as the Persian, the Angola, the Spanish, the Chinese, the Angora, and the Chartreause or Maux, which latter are entirely destitute of tails. All, however, have certain characteristics in common. They are very prolific, fond of the house rather than its master or mistress, have a great dislike to dirt and are inveterate enemies to rats and mice. But little care is required to render a cat a tame and pleasant companion; but if you have a garden you must not grow valerian in it, for this aromatic plant is such a favourite with puss that it will attract to your garden all the cats in the neighbourhood; and they will not desist till they have rolled over and scratched every bit of valerian out of the bed. Cats should not have too great a profusion of animal food, or they will get fat and lazy; but a due proportion of fish and household scraps may be advantageously given them with skim milk and water. Good mousers should not be petted too much, nor allowed to stray about the streets. Belonging to the tiger family, cats are often sly, treacherous, and vicious; and no amount of training will prevent some of them seizing your favourite canary or gold fish and making a surreptitious meal of the dainty morsel. Cats are subject to but few ailments, and if carefully looked after live for many years.

Rabbits.—These animals are both profitable and amusing. They should be kept very clean and regularly fed. One important rule as to food is, *never to give wet vegetables*, which are absolutely poisonous to them. *Abundant food* is the main thing; and next to that variety. They should have oats once a day. The leaves and roots of carrots, all sorts of peas and beans, the leaves and branches of trees, wild succory, parsley, clover, brewers' dry grains, apple parings, peas-haulm, dock-leaves, sorrel, may be their diet during summer; and hay, potatoes, artichokes, turnips, beet root, &c., during the winter. The best way to begin rabbit-keeping is to obtain a number of young ones fairly weaned, at about nine or ten weeks old. *Wild* young rabbits, called warren rabbits, will not do, for they cannot be domesticated, and run away at the earliest opportunity. The hutches should be dry, light, well ventilated, and strong; well raised from the ground. The doe's hutch must have a partition about twelve inches from one end, and a hole must be cut at the extremity nearest the front, about an inch and a half from the bottom, more than sufficiently large for the rabbit to pass through. The edges of the hole should be bound with tin or zinc to prevent the rabbits gnawing them; and if a small door is made to close the hole, it will be as well, as the rabbit can be shut in on one side while the other is being cleaned out. This partition should be movable, as the object of

this is to form a snug corner in which the doe may make her nest.

The *Feeding Troughs* are long open boxes outside the hutch: but a better plan is to have a swing board outside, which the rabbits can push inwards when they are feeding, and which falls down when the meal is over. Some persons have lids to the feeding trough; these the rabbits soon learn to lift—for rabbits are by no means dull or stupid animals—and which shuts down of itself as soon as the rabbit's head is withdrawn. Keep the buck in a seperate hutch, as he is apt to fight with his wife and children. If you let your rabbits run loose in a yard or garden occasionally, be careful to provide security from cats, dogs, and rats. Scatter over their court the refuse and sweepings of the kitchen and garden, and even a portion of stable litter, and the rabbits will be all the better pleased. Give them abundance of dry food and they will thrive, and soon become so tame as to eat out of your hand, and to flock around you when you present yourself with a new supply.

Squirrels.—Not difficult to tame and very amusing as domestic pets. Squirrels require but slight care beyond the keeping their cages thoroughly clean and sweet and regularly supplying them with food, which consists of nuts, fruit, seeds, and bread crumbs. They seldom breed in captivity. They may be bought at the bird-fanciers'.

Guinea Pigs.—These little animals feed on all kinds of green vegetables, corn, beans, peas, and bread crumbs. Their houses must be kept particularly clean, as they soon smell offensively and become a nuisance. They breed readily; the young ones requiring to be kept warm and dry. A good bundle of hay should always be in the corner of the hutch, when the little tailless creatures soon make for themselves comfortable nests. They are perfectly harmless, but rather stupid, though they soon accustom themselves to come when they are called and feed from the hand.

White Mice.—This variety of the ordinary species is an amusing, harmless little creature, often kept by boys and girls as home pets. They may be bought cheaply of the bird-fancier, and when kept in cages or hutches, care must be taken to keep them particularly clean and dry: otherwise their peculiar odour becomes offensive. Their food is bread and milk, with occasionally a little oatmeal or a few peas and beans. Avoid cheese and meat. They require cotton wool and hay for their beds, and are very prolific.

Gold and Silver Fish.—A few hints as to the management of these amusing pets: When purchasing a globe procure as wide-mouthed a one as possible; and in use it should never be more than three parts full of water. By these means you will secure as much air as possible for the fish. Keep the globe in the most airy part of the room, neither in the sun, nor near the fire. Change the water daily, and handle the fish tenderly when doing so: A small net is the best thing with which to remove them. The best plan is to have two equal-sized globes and change the fish from one to the other daily, always being careful that the fresh one is perfectly clean and the water (river water is far preferable) fresh and clean. *Never give the fish food;* all they require is plenty of fresh air and fresh water—they will derive sufficient nutriment from the animalculæ contained in the water. Numbers of people kill their gold fish by giving them bread; for though bread is good for gold fish, and they will eat it, the uneaten crumbs immediately get sour and deteriorate the water, to the great injury of the fish. Keep the globe out of the reach of cats and dogs. Sometimes a fish seems less lively than usual, and on a close inspection will have a sort of mealy look, and in a day or two, this mealiness will turn out to be a parasitical fungus. We have never found any of the so-called remedies of the slightest use. There is nothing for it but to take the fish, at the first appearance of the disease, and destroy it,

for it will not recover, and will infect the others. The inexperienced gold-fish keeper, whenever a fish seems unhealthy, had first better place it by itself for a few days; he will then see whether the fungus makes its appearance; if not, the fish may recover, and be returned to the globe. Another disease is apparently an affection of the air-bladder, arising from being supplied with too little air. Fish recover from it when removed from the globe and placed in a pond. When under the influence of this disease the fish swims sideways, with its body bent as if its back were broken; and in a short time it dies. Whenever those symtoms are observed, the fish should be placed in a large tub of water, and a small stream of water allowed to drop into it; the water, through dropping, becomes more aërated, and the fish will frequently recover.

Domestic Fowls.—Cocks and hens may be profitably kept in town gardens, but they should, if possible, have a good grass run, with a dust heap at the end. All kinds of fowls want animal food and lime for the making of their egg-shells. The fowl-house should be dry and properly provided with perches. The nesting-places should be separate from each other, so that they may be easily cleansed when the hen has done sitting. A round bushel-basket, such as they bring with vegetables to market form capital nesting places. They may be put down in any convenient place in the fowl-house. Each one should be about half filled with coal ashes or loose earth, with some short bruised straw on the top. This the hen readily hollows into a perfect nest, and is much better than a large quantity of straw or a flat board.

Sitting and Hatching.—When a hen sits in one of these baskets, she can at any time be covered with a coop, so as to prevent other hens going into the same nest to lay—a circumstance that generally leads to fighting, and, consequently, to the destruction of the eggs. As soon as the chickens are hatched, the basket should be taken out of the fowl-house, the straw and ashes or mould thrown out, and the basket washed, so as to get rid of the fleas, &c. June is the best month for hatching. It is best to allow a hen to sit in the same nest in which she has been in the habit of laying, as there is usually some trouble in getting a hen to sit steadily in a strange nest.

When a hen becomes *broody* or wants to sit, she shows her desire by remaining on the nest, and by a strange clucking noise she makes in the place of her usual note. To ascertain whether she is likely to sit steadily, it is usual to give her three or four nest-eggs to sit on for a day or two. If she is found to sit well, the eggs she is to hatch should be placed in the nest when she leaves it to feed, and the nest-eggs taken away. The day on which the eggs are given her should be carefully noted down, and, if convenient, two hens should be sit on the same day, for a reason that will appear presently. The eggs for sitting should be as fresh as possible, for if more than fifteen or twenty days old they do not hatch so readily as when fresher. If a friend who has a good breed of fowls offers you a sitting of eggs, you may safely accept them. They will hatch none the worse even if they have been sent a hundred miles.

After the hens have been sitting twenty days, some of the chickens begin to chip the shell. On this day the hen should not be disturbed. On the twenty-first day—that is the same day three weeks that the eggs were put under the hen, all the chickens will be hatched. Many persons take away those first hatched, and put them in a basket with flannel by the side of the fire. This is a very useless plan—the hen and chickens had much better be left alone. When undisturbed, the hen will not leave the nest till the twenty-second day, and then all the chickens will be found quite strong and able to run. On no account should the young chickens be crammed with food; until they are about thirty hours old they do not require any other nourishment than the yolk of the egg from which they are hatched.

Food for Chickens.—The best food or young chickens consists of whole grits, but their diet should be varied. Coarse oatmeal, mixed into a crumbly mess with milk or water, chopped hard-boiled egg, or curd, are very useful; but the food on which they make the most rapid and healthy progress is the supply of grubs, insects, small worms, ants' eggs, and other animal substances that the hen obtains by scratching. Some persons say that the hens roam too much when they are not cooped, and weary the chickens; but if the hen is well fed, there is no danger of her wandering so far as to tire the chickens.

Food for Fowls.—All fowls require *warmth-giving food*, as starch-rice, the solid part of potatoes, &c.; *flesh-forming food*, as the gluten of wheat, oatmeal, peas, barley; and *fat-forming food*, as the yellow variety of Indian corn, and other things containing oily and fatty matters. These must be given in combination, not singly.—*Grain* forms, naturally, the principal food of poultry of all kinds. *Barley* is the best, as it contains a larger amount of flesh and fat-forming material. Next comes *oats*, which are to be given more sparingly, in consequence of the quantity of husks; but in the form of oatmeal it is highly nourishing and fattening, especially for Cochins and Spanish fowls. *Wheat* stands in rather less request; it is more expensive, and not more nutritive. *Rice* is useful only in the making of bone, and should, therefore, be given only in small quantities, except as a variation to richer food. Boiled rice is a capital food for chickens when taken in conjunction with barley ed *buckwheat flour*, or *millet*, both of which are very nutritious. Bran, pollard, malt-dust, and middlings are capital additions to their meal. A *fresh supply of water* daily is indispensable

Profitable Varieties.—For keeping in town yards and small enclosures, the Spanish is a good breed, but the hens are bad sitters. The Minorca is a plump variety of the Spanish. Game fowl are great favourites with many, but as egg-producers they are inferior to Spanish, Hamburgh, Polish, Dorkings, or Cochins. For table purposes no fowls are so profitable as Dorkings. This bird, says a practical henwife, is an excellent farm-yard fowl:—"It is a good layer, a close sitter, and an attentive mother; the chickens grow rapidly, and are *excellent* for the table. The pure white Dorking may truly be considered as fancy stock as well as useful, because they will breed true to their points; but the grey Sussex, Surrey, or coloured Dorking, often sport. To the breeders and admirers of the so-called 'coloured Dorkings' I would say, continue to improve the fowl of your choice, but let him be known by his right title; do not support him on another's fame, nor yet deny that the rose comb or fifth toe is essential to a Dorking, because your favourites are not constant to those points; the absence of the fifth claw to the Dorking would be a great defect, but to the Sussex Dorking it is my opinion it would be an improvement, provided the leg did not get longer with the loss." The principal drawback to the Dorking is the delicacy of the chicken; but for persons who rear fowls in order to make money of them, they are invaluable for tenderness and delicacy of flavour.

Many spurious Dorkings are bred and brought to market. A full-grown cock should weigh eight pounds, and a hen seven; heavier weights have been reached, but they are not common. The form of the body should be square, very broad across the shoulders, and full-chested; the legs should be short, nothing more than the shanks being visible in the hen, and the hock only just showing in the cock. The shanks and feet are white, and the latter furnished with an additional hind toe. The head should be small and neatly formed; two varieties of combs are found in true-bred birds—a large evenly-arched single comb, and also a broad double, or, as it is often termed, a "rose comb;" the latter should be flat on the top, and studded with points uniform in height. The single-combed birds are generally more admired.

Bantams, whether known as black, white, gold-laced, silver-laced, game, booted, or what not, have all certain characteristics in common—diminutive size, grace of outline, and beauty of plumage. Bantams can hardly be called "profitable," though they are good layers and sitters. Indeed, they are generally kept rather for ornament than service. "Feather-legged bantams," says a fancier, "may be of any colour; the old-fashioned birds are very small, falcon-hocked, and feathered with long quill feathers to the extremity of the toe. Many of them were bearded. They are now very scarce; indeed, till exhibitions brought them again into notice, these beautiful specimens of their tribe were all neglected and fast passing away." Game bantams are miniature resemblances of the famous game-fowl—pert, lively, and full of feather.

For *eggs* the best varieties are Hamburghs, Spanish, and Cochins.

Fowls that lay freely and sit readily.—1. Bantams of all kinds; 2. Game fowl of every variety; 3. Dorkings, in which term are included the speckled, the Surrey, the Old Kent, the cuckoo, and the coloured; 4. Cochin-Chinas; 5. Malay; 6. Dark-crested fowl.

Fowls that lay well but will rarely sit.—1. Spanish of all kinds; 2. Hamburghs; 3. Polands.

To make a profit of poultry, select the right sorts. Keep partridge-coloured Cochin China and speckled Dorking pullets in equal numbers, none older than a year, with one Dorking cock to each half-dozen pullets. By this plan you will have a good supply of eggs at all seasons, and all the chickens will be excellent for the table. If you want to rear chickens, and also have plenty of eggs, then you must have hens that lay and sit without trouble.

To increase the Product of Eggs.—We understand it has been practically demonstrated that a little cayenne pepper, administered with their common food, at the rate of a tea-spoonful of cayenne each alternate day to a dozen fowls, will increase the product of eggs. A Boston (U.S.) housewife, who first pursued this plan, found a considerable increase in the yield, and that the cayenne had the same effect both winter and summer.

Pigeons.—The best place in which to keep pigeons in towns is the loft of a stable, or the space between the upper rooms and the roof of the house. In the country they can be comfortably housed in dovecotes, properly protected against wind and rain. In comfortable quarters pigeons rapidly increase and multiply. The floor of the pigeon-house must be strewn with sand or gravel. Pigeons should be fed twice a day, at the same hours, until they get used to their master. When they begin nesting, scatter a few sticks and straw on the floor; they will know how to use them. When there are young birds hatched, and not before, you may open the door or window, and let the parent-birds go forth to seek their food—they will not require much more from you. The rock-dove likes to stray far and wide in search of provender. No young pigeons should be killed to eat the first year. Keep dovecotes well white-washed to prevent disease. Never give food that has visible insects in it; take especial care of mites. Observe to give each pair of parent-birds two convenient holes or little rooms, and put in every nest a straw basket or earthen unglazed pan for the eggs. Every pigeon-house should be provided with a pan of water and a lump of rock salt.

The varieties of pigeons are both numerous and curious—tumblers, carriers, croppers, pouters, blue-rocks, &c.; but they may all be fed on the same kind of food. Tares or small horse-beans are the best and cheapest; but grey and white peas, hemp, wheat, and rape-seed may be advantageously used to vary their diet. Pigeons' dung need not be wasted, as it is a really good garden manure.

Singing Birds, — *Food for.* — Birds are often rendered diseased, or spoilt in their song, from improper food. The following are some practical hints:

For Canaries. — Canary-seed, one pint; rape-seed, half a pint; millet-seed, quarter of a pint. Mix. This is the general seed during moulting; give in addition some maw-seed, scattered on the bottom of the cage, and occasionally a little bruised hemp-seed. During summer keep them provided with groundsel, chickweed, lettuce, watercress, &c.; in winter supplement the usual seed with a slice of sharp apple, and a small root of common grass plucked up from the road-side; they are very fond of this, especially if it be in seed, and the earthy particles that cling to the roots are of use to them. If they have a few white lettuce seeds scattered sometimes over the cage-bottom, it will be found an incentive to them to sing. Give a little saffron when moulting.

For Goldfinches.—A pint of canary-seed; a quarter of a pint of maw-seed; half a pint of rape-seed; and a quarter of a pint of *well*-bruised hemp-seed. Mix. Give green vegetables as directed for canaries, and, when it can be procured, a ripe plantain. Pay particular attention to the bruising of the hemp-seed—*one whole one may prove fatal*, as these birds, having slender beaks, unfitted for husking so large a seed, are apt to get the shell between the beak and nostril, causing inflammation and death. During moulting give a little flax-seed (linseed) as a treat, and put a rusty nail in the water. Goldfinches are particularly fond of thistles, which, either through ignorance or carelessness, are however seldom given them. The ripe seed-heads arc to be gathered during July or August. Use for the purpose a sharp knife and stout gloves. They will keep well in any dry place, and afford great pleasure to your birds. Bechstein says, "A thistle-head delights the goldfinch;" and, to anyone who has watched the bird eagerly engaged with one, this cannot be doubted. If the down flying about be found troublesome, cut it down to the top of the husk with a sharp pair of scissors, leaving the seeds intact.

For Linnets.—Canary seed, a pint; rape seed three-quarters of a pint; hemp seed (whole), quarter of a pint; linseed, a pint. When moulting give a little maw-seed.

For Chaffinches.—A pint of Canary seed; half a pint of rape seed, and a *few* whole hemp seeds mixed in.

For Bullfinches.—Canary and rape seed in equal proportions, and one-fourth of hemp seed; a little maw added when moulting. Be careful not to give too much hemp, as it turns the plumage black. A few unopened buds of the pear, apple, plum, cherry, or hawthorn trees in the Spring are a great treat to this bird; the shade of any leaves of these trees over the cage in Summer is also grateful to it, as it is a wood-loving songster.

The above are all chiefly gramnivorous birds, of the kind usually kept in the house; for the food of the insectivorous such books as Bechstein's "Cage Birds" or Mudie's "British Birds" should be consulted.

Another kind of food, recommended for thrushes, robins, larks, linnets, canaries, finches, and most other singing birds, and said to preserve them admirably in song and feather is made thus:—Knead together three pounds of split peas ground or beaten to flour, one and a half pound of fine crumbs of bread, the same quantity of coarse sugar, the raw yolks of six eggs, and six ounces of fresh butter. Put about a third of the mixture at a time in a frying-pan over a gentle fire, stir it until a little browned, but not burned. When the other two parts are done, and all cold, add to the whole six ounces of maw seed and six pounds of bruised hemp seed, separated from the husks. Mix.

To clean birds' feet when dirty and neglected. — Some birds with every means granted them of bathing will not do more than splash a few drops over their heads and backs. The consequence of this (and the neglect of cleaning the perches constantly) is that the feet get coated with dirt, swell, and become so painful to the bird that he mopes. When this is the case fill a saucer with tepid-water and have ready a bell glass—(an ordinary glass shade if round will do)—one

person must now quietly catch the bird and put it into the water in the saucer, another person putting over the shade on the withdrawal of the other's hand. If carefully done the bird will be little frightened and probably at once begin to bathe. Keep him in the water till the dirt is softened and removed, which should not take more than ten minutes. Quietly re-catch the bird and examine the feet, and if lumps remain remove gently with a camel's hair brush. Have a soft clean handkerchief on the bottom of the cage and replace him on it, having previously well cleaned and scalded the perches. If necessary, repeat the operation after two or three days.

Proper Treatment of Young Canaries.—No young birds should ever be removed, when carefully nursed by their parents, until they are at least five weeks old; and their food should be changed gradually. They should then be placed in separate cages, and kept in a warm room, where there is a fine, steady song-bird, ready to act the part of "tutor." At this tender age their little throats will be found full of music—they being quite *piano;* their early notes being called "recording;" and they readily copy, or imitate, whatever they hear. Hence, the great importance of putting them out to a good preparatory school.

Talking Birds.—Parrots, Paroquets, Mackaws, Cockatoos, and other foreign birds of this kind are fed on bread and milk, Indian corn and hemp seed mixed, scraps of raw meat, &c.; but too much sugar is injurious. *To teach them to talk,* the room should be darkened and the birds talked to singly by its instructor. The Grey Parrot is the best talker, and easily learns to pronounce words and even sentences it is accustomed to hear frequently repeated. Ravens, Jackdaws, Jays, Magpies, Starlings, and other native talking birds are all soft billed, and require a regular supply of animal food, bread, milk, and water. Both these and the parrots are subject to various diseases—as asthma, surfeit, diarrhœa, atrophy, pip, &c. A rusty nail in their water (a little cayenne for parrots), stick-liquorice, chalk, or scraped root of white hellebore will be necessary; but if your bird continues ill, consult the bird-fancier. For attacks of vermin, to which they are all subject, an ointment of precipitate powder is necessary, or an infusion of tobacco water applied to the parts they are seen to peck and scratch. In confinement our English talking birds become very tame and teachable. They should be allowed to leave their cages, and very little training will accustom them to return to them at night. They have all a propensity for hiding their food and stealing bright things, as silver money, spoons, &c. Upon this peculiarity rests the interest of the old story of "The Maid and the Magpie."

Bird Stuffing.—Most persons who keep birds and have the misfortune to lose one by death or accident, like to have it stuffed and set up to imitate life. The following directions by a Professor of the art of Taxidermy, will therefore be gladly accepted.

Preparing the body. — Beginners should never attempt to stuff any bird smaller than a blackbird: the larger the specimen the easier it is to stuff. First put a small quantity of cotton wool down the throat in order to prevent moisture escaping from the stomach: this is important, and must *never* be omitted; then break the bones of the wings close to the body; divide the feathers from the bottom of the breast-bone to the vent; divide the skin in like manner. Do not puncture the abdomen; raise the skin with the point of a penknife until you can take hold of it with your finger and thumb; hold the skin tight, and press on the body with a knife as the skin parts from it, putting the knife farther under until you reach the thigh; break the thigh-bone close to the top joint, and push it gently up until you can take hold of the flesh. Now take the bone that is attached to the leg and pull it gently out, turning the skin of the leg inside out; cut the flesh off close to the knee and skin as far down to the back as you can. Do the same with the other side of the bird if any

damp escape from the flesh dry it up with fresh bran. Put the skin on both sides out of your way with a small pair of scissors; push the body up (the tail of the bird being held in your hand); cut the back through as close to the tail as possible (this must be done inside the skin), then take the bird by the back-bone and gently push the skin down with your thumb-nail till you come to the wings; take as much flesh from the wing-joints as you can, and go on skinning till you reach the ears; take hold of them close to the skull and pull them out. Take the eyes out, and be careful not to burst them, holding the skin with one thumb and finger while you pull the eye out of the skin with the other. After taking the eyes out, put as much cotton in the sockets as will fill them. Skin down to the beak very gently, cut the neck away from the skull, and also a piece of the skull to take the brains out; anoint the skin with Becœur's soap, which may be bought at the chemists'; put a little tow round the thigh bones to form the thigh, and gently turn the skin back again. If care has been taken, the loss of the body will make but little difference in the size of the bird.

Setting up the body.—Get three wires, one as long again as the bird, the other two twice the length of the legs; file them sharp at one end, bend the blunt end of the long wire, put some tow on the bend and squeeze it tight to fasten it, then twist the tow until it is about the size of the body; do it as tight as possible. Have some tow cut up small: get a strong wire, rough one point, and turn the other into a bow to hold in your hand; take hold of some of the tow with the rough end, and push it up the neck; this requires but a small portion of tow; put some in the chest and a little all over the inside of the skin. Put the body-wire up the neck, and bring it out through the skull at the top of the head; draw the body into the skin, and be careful not to stretch the neck; then put the other wires through the centre of the foot up the legs, being careful not to break the skin: put enough wire inside the skin to push into the body to fasten the legs; cut off a piece of the wire that has gone through the head, and put it through the tail into the body (under the tail, of course); open the eyelids, and put in the eyes; mount the bird on a perch fastened to a small board, bend the legs, so that it will seem to stand in a proper position, be careful not to loosen the leg wires from the body, bring the feathers nicely together between the legs, bend the neck, and put the head in the shape you think proper, then run a pin or a piece of wire through the butt of the wing and into the body, to keep it in its proper place. Should the bird be out of shape in places, raise the skin gently with a needle, put the feathers as straight as you can, put a pin in the breast, back, and under each wing near to the top of the thigh, fasten the end of some cotton to one of the pins, and gently wind it round the bird from one pin to the other; put up the bird when you see that it is right. You had better let the specimen dry of itself, then bake it; keep it free from dust, and it will dry in a fortnight. Spread the tail in a natural position, and when it is dry, unwind the cotton; cut the pins close to the butt of the wing and head; take out the others, and the bird is finished.

An easier and less expensive way of preserving memorials of departed pets is by painting.

Pictures of Birds with their natural feathers.—Take a thin, well-seasoned board and paste down on it smoothly a sheet of white drawing paper, and let it dry; if the colour of the wood can be seen through the paper, paste down another sheet and so on until perfectly white; let stand till quite dry; then draw the figure of your bird as exactly as possible on the papered surface; then paint what trees or groundwork you intend to set your bird upon, also its bill and legs, leaving the rest of the body to be covered with its own feathers. Next prepare that part to be feathered by laying on thick gum arabic, dissolved in water; lay it on with a large hair pencil, and let it dry; then lay a

second coat of gum arabic, and let it dry; and a third, and oftener, if you find that when dry it does not form a good body on the paper, at least to the thickness of a shilling; let it dry quite hard. When thus prepared, take the feathers off the bird as you use them, beginning at the tail and points of the wings, and working upwards to the head, observing to cover that part of your drawing with the feathers taken from the same part of the bird, letting them fall over one another in the natural order. Prepare your feathers by cutting off the downy parts about the stems, and the large feathers must have the insides of their shafts shaved off with a sharp knife or a piece of glass to make them lie flat; the quills of the wings must have their inner webs clipped off, so that in laying them the gum may hold them by their shafts. When you begin to lay them, take a pair of steel pliers to hold the feathers in, and have some thick gum-water, and a large pencil ready to moisten the ground-work by little and little, as you work it: then lay your feathers on the moistened parts, which must be just *clammy*, to hold the feathers. You must have prepared a great many small sugarloaf shaped leaden weights, which form by casting the lead into sand, in which shapes or moulds for it have been made by means of a pointed stick prodded all over the surface, having small holes to receive the melted lead. These weights will be necessary to set on the feathers when you have merely laid them on, in order to press them into the gum till they are fixed. Be cautious lest the gum comes through the feathers. Do not have your coat of gum too moist. When you have wholly covered your bird with its feathers, with a little thick gum stick on a piece of paper, cut round, of the size of an eye, which colour the same as the eye of the bird if you cannot procure a glass bead of the kind. When the whole is dry, dress the feathers all round the outline and rectify defects: then lay on it a sheet of clean paper, and a heavy weight, such as a book, to press it; when dry preserve in a glass frame, such as used for pieces of shell-work, stuffed fish, &c.

Bees.—*Management of.*—Select for your hives a sheltered part of the garden, screened from the north and east winds, but open to the southern aspect. Do not place the hives so that the sun strikes upon them too early, because bees must never be tempted to quit their hives in the heavy morning dew, which clogs their limbs and impedes their flight. Place them, if possible, near a running stream, as they delight in plenty of water; but if none is within their easy reach, place pans of fresh water near the hives, in which mix a little common salt; and let small bits of stick float on the surface, to enable the bees to drink safely, instead of slipping down the smooth sides of the vessel, to perish. Never place hives under a roof: it heats them, and induces the bees to form combs outside the hives, instead of swarming. Let the space before the hives be perfectly clear of bushes and other impediments to their movement. Bees, returning heavy laden and wearied, are unable to bear up against any object, should they hit themselves and fall. Trees and bushes in the vicinity are, however, advisable, as they present convenient spots for swarms to settle, which might otherwise go beyond sight or reach. In November remove your hives upon their stools, into a cool, dry, and shady room, or outhouse, where they will be protected as well from the winter sun as from the frosts. Warm days in winter often tempt bees to quit their cells, and the chilling air numbs and destroys them. Let them remain thus until February or March, should the spring be late and cold. It is not sufficient to stop the mouth of the hive with clay; the bees will soon make their way through it. Bees are subject to a disease like dysentery in the spring. Before you place the hives in their summer quarters, turn up the hive, and notice the smell proceeding from it. If the bees are healthy, it will smell like heated wax; but if diseased, like putrefaction. In this case, a little port wine, or brandy, mixed

with their food, will restore them. In the early spring feed them, and do the same when the flowers pass away in autumn, until they are taken into the house, then do not further disturb them. The proper food is beer and sugar, in the proportion of one pound to a quart; boil it for five minutes. In May, bees begin to swarm, if the weather be warm. New and dry hives must be prepared, without any doorway; the entrance must be cut in the stool. Sticks across the inside of the hives are of no use, and very inconvenient. Let the hive be well washed with beer and sugar, before you shake the bees into it. After swarming, place it upon a cloth with one side raised upon a stone; shade it with boughs, and let it alone till quite dusk, then remove it to the stool where it is to stand.

A practical writer thus describes the process of chloroforming Bees:—"The quantity of chloroform required for an ordinary hive is the sixth part of an ounce: a very large hive may take nearly a quarter of an ounce. My mode of operation is as follows:—I set down a table opposite to, and about four feet distant from, the hive; on the table I spread a thick linen cloth; in the centre of the table I place a small shallow breakfast plate, which I cover with a piece of wire gauze, to prevent the bees from coming in immediate contact with the chloroform; and into this plate I pour the chloroform. I now quickly and cautiously lift the hive from the board on which it is standing, set it down on the top of the table, keeping the plate in the centre; cover the hive closely up with cloths, and in twenty minutes or so, the bees are not only sound asleep, but, contrary to what I have seen when they are suffocated with sulphur, not one is left among the combs; the whole of them are lying helpless on the table. You now remove what honey you think fit, replace the hive in its old stand, and the bees, as they recover, will return to their domicile. A bright, calm, sunny day is the best; and you should commence your operations early in the morning, before many of them are abroad." Care must be taken that the dose is not too strong.

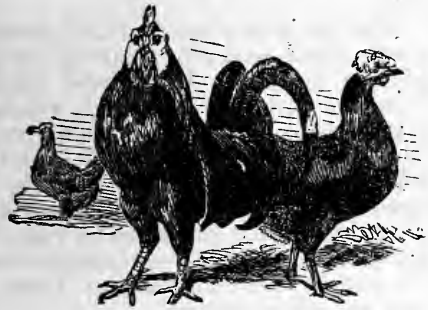
Silkworms.—In this country silkworms are kept simply for amusement. The eggs which produce the worm are hatched in May or June, unless artificial heat brings them out at an earlier period. The eggs are about as large as mustard-seed; and the worms, when first hatched, are very small; but they feed on fresh lettuce and mulberry leaves so voraciously, that in six or seven weeks they grow to their full size.

When growing they shed their coats several times, each time assuming more delicate colours. They have nine holes on each side, through which they breathe. The silk is spun from two small sacks on each side, filled with a gummy substance which becomes silky as it dries. The worm never breaks his thread as he spins, and it is said one ball contains entire silk enough to reach six miles. These balls are called cocoons.

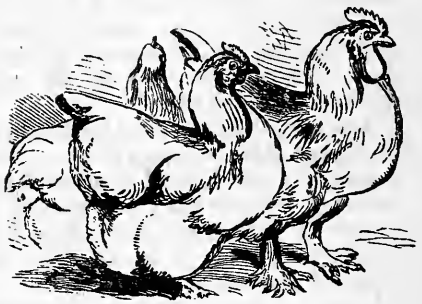
These answer the same purpose as the chrysalis of the butterfly; and if they were let alone, a delicate white moth would eat its way out of each of them: but the holes thus eaten would break the silk in pieces; therefore, in order to kill the moths, the cocoons are baked or scalded. Those that are reserved for eggs are laid aside in the dark on sheets of paper. As soon as the moth comes out of her cocoon, she lays her eggs and dies. A few minutes' attention each day, for six or seven weeks, is all that is necessary. One person can attend to fifty thousand. It takes two thousand worms to produce a pound of silk. Everything about them must be kept clean and sweet. They must have fresh mulberry leaves two or three times a day; and must neither be covered with dew nor dried in the hot sun.

BLACK BANTAMS.

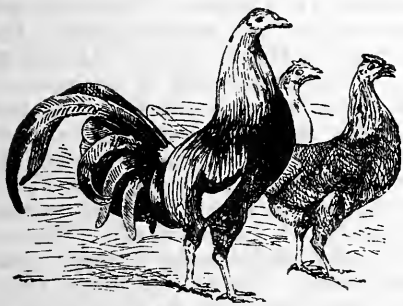
FEATHER LEGGED BANTAMS.



BLACK SPANISH FOWLS.



COCHIN-CHINA FOWLS.



GAME FOWLS.

SPECKLED HAMBURG FOWLS.

For the Management of Domestic Fowls, see p. 289.

XII. DOMESTIC PESTS.

Rats and Mice.—1. Mix a few grains of powdered nux vomica with oatmeal, and lay it in their haunts, observing proper precaution to prevent accidents. 2. Another method is to mix oatmeal with a little powdered phosphorus. 3. Dried sponge cut small, and dipped in oil of rhodium and honey, proves mortal to those that eat it, by distending their intestines. 4. Birdlime laid in the places which they frequent will adhere to their skins, and become so troublesome as to make them leave their old quarters. 5. Balls made of a mixture of malt dust and butter, with a little of the oil of aniseeds, or rhodium, will allure them into a trap, when other baits have failed. 6. Having kneaded some wheaten flour or malt meal into a paste, when it becomes sour mix with it fine iron filings, and form the whole into balls; then put them into the crevices or holes, and it will kill them. 7. Mix two or three grains of arsenic in a ball of dripping and flour, and strew several of these balls in the places most infested by the rats. 8. Another mode is to mix about a drachm of the poison in a dish with boiled potatoes, slices of bacon, &c.; or to melt some cheese, and mix the arsenic with it. All these, however, have been known to fail, when arsenic, mixed with plain boiled potatoes, without any highly-flavoured food, has been effectual. When it is found that the rats, for a considerable length of time, avoid one kind of bait, another should be tried; and persons should not despair of their taking the poison eventually because they avoid it for several days together, as they will sometimes do this, and then in a single night devour all the bait.

Notwithstanding the efficiency of these poisons, and the numbers caught in traps, a good cat will do more service in destroying and frightening away rats and mice than the whole list of poisons and all the traps that were ever made.

In places where cats cannot safely be allowed—as cupboards, &c.—traps and poisons must, however, be employed, and of those given above the strongest and best—*though very dangerous*—is strychnine, which is a very powerful preparation of nux vomica, mixed, a few grains nightly, with food. This is not easily detected by the rats or mice, and, if eaten, is instantaneously fatal. The greatest care must in all these cases be exercised, and servants or children should on no account be allowed to have anything to do with the preparation. It has been stated that vermin have a great aversion to the smell of garlic, and, if a clove or two of this vegetable be introduced into their holes, they will leave the place and seek some other haunt.

Insects.—*The Habits of Insects.*—The butterfly which lives on honey, and did live on leaves, lays her eggs on a twig. She seems to feel that honey will not suit her young, and that the leaves will wither and fall before another spring comes round.—The gnat, which lives in the air, and feeds on blood, lays her eggs on the surface of water; and the sugar-loving house-fly knows that very different food is necessary for her young.—The nut-weevil chooses the embryo of the nut; the goat-moth the bark of the willow; the rhipiphora braves the dangers of the wasp's nest; the œstrus lays on cattle; the ichneumon in caterpillars; the gall-fly in the still almost imperceptible bud; and some insects even in the eggs of others.—Generally the larvæ forage for themselves; but, in some cases, the mother supplies her young with food. Thus, the solitary

wasp builds a cell and fills it with other insects. If, however, she imprisoned them while alive, their struggles would infallibly destroy her egg; if she killed them they would soon decay, and the young larvæ, when hatched, would find, instead of a store of wholesome food, a mere mass of corruption. To avoid these two evils, the wasp stings her victim in such a manner as to pierce the centre of the nervous system, and the poison has the quality of paralyzing the victim without killing it. Thus deprived of all power of movement, but still alive, it remains some weeks motionless and yet fresh.—But, perhaps, the ants are the most remarkable of all. They tend their young, they build houses, they make wars, they keep slaves, they have domestic animals, and it is even said that in some cases they cultivate the ground.

Insect Poison.—Petroleum oil possesses the highest efficacy as a destroyer of all kinds of insects injurious to plants or animals, and the less purified, and consequently the cheaper, it is the better. Thirty parts should be mixed with one thousand of water, and applied where required. Vermin of houses may be destroyed by introducing into the holes or cracks a few drops of petroleum.—A solution (one to twenty of water) of carbolic acid, which is said to kill every insect from the size of a mouse downwards. It is also said that Russia leather drives away all manner of vermin if a small piece of it is worn near the person, or even kept in the pocket.

Moths are very destructive, and, when suffered to make inroads into wearing apparel, &c., are with difficulty got rid of. To preserve blankets from them, fold the blankets up and lay them between feather-beds and mattrasses that are in use, unfolding them occasionally, and shaking them. Woollen stuffs, such as cloth cloaks, merino dresses, &c., are best placed in drawers, with sheets of paper, moistened with spirits of turpentine, laid between them; lavender-flowers, cedar-shavings, and cuttings of Russia leather will also produce a similar effect. Damp harbours moths; therefore great care should be taken in putting woollen things away for the summer, that they have been well brushed and are perfectly dry. Furs should be occasionally taken out, shaken, beaten with a cane, and hung in the open air. Great care must be taken that they are dry when put away, but they must not be placed near the fire. Other methods are employed for the same purpose, such as laying a few pieces of camphor among the furs; peppering them with black pepper; bitter apples, obtained of any chemist, are also placed in little muslin bags, and sewn over in several folds of linen, carefully turned in at the edges.

Bugs.—Take of corrosive sublimate, two drachms; spirits of wine, eight ounces. Rub them well together in a mortar until the sublimate is dissolved; then add half a pint of spirits of turpentine. This is an effectual destroyer of bugs; but, being a strong poison, great care should be taken in using it. *Another plan* is to rub the bedsteads well with soft soap or lamp oil. This alone is good, but, to make it more effectual, get sixpenny-worth of quicksilver and add to the mixture. Put it into all the cracks around the bed, and the pests will soon disappear. The bedsteads should first be scalded and wiped dry; then lay on the mixture with a feather. *Or,* dip a sponge or brush in a strong solution of vitriol, and rub it over the bedstead. This will expel the bugs, and destroy their nits. Cleanliness, however, and frequent examination, will prove the best remedy.

In houses infested with bugs—and sometimes old houses are so, in spite of all precautions—the following is an effectual cure. Take one pound of common lump brimstone, or sulphur, value twopence; place it in an old iron saucepan, and put a piece of red-hot iron on it to set it on fire, having previously filled up the chimney and every crevice; allow the room to remain closed about three hours. The fumes of the brimstone will smother every insect in the room; repeat as often as required; be sure to leave no

children, birds, or domestic animals in the room while fumigation is going on; put a piece of iron or stone under the saucepan containing the brimstone, so as not to damage the floor.

When bugs are in the walls and floors, all the crevices should be stopped with glazier's putty; and, before the walls are re-papered, the old paper should be stripped off, and at least one coat of oil-paint be laid on. If they are in bedsteads, the bedstead should be taken to pieces, well washed and dried, and aqua-fortis laid with a brush in all the holes and crevices, or some size may be made and laid on with a brush; this, when dry, is an eternal prison for bugs, and also for their eggs. Another very good plan is to put spirits of wine, or strong tobacco-juice, on every part of the bedstead that is suspected, doing this by portions at a time and setting fire to it; this will not injure even a polished bedstead, if the part be immediately rubbed up with a cloth covered with a little beeswax. Where bugs are very numerous, and they are in situations which cannot easily be got at, there is but one effectual remedy—fumigation, as above directed.

Fleas.—Numerous remedies are resorted to by good housewives to get rid of and prevent the increase of this most prolific domestic torment; but the best preventive and also remedy is great cleanliness. The rooms should be frequently washed, and the bedclothes exposed to the free action of the outer air. A bit of camphor in the bed, or camphor sprinkled in the bed in powder—which is made by dropping upon a lump of camphor a few drops of spirit, and then reducing it by the hand to powder—will prevent fleas from coming near the person. *Another Remedy.*—Sprinkle the floor with a decoction of wormwood; hang near the bed a bag filled with dry moss, *or* lay therein some fresh leaves of pennyroyal sewn up in linen. As dogs and cats harbour fleas very much, they should not be allowed to come into bedrooms.

Flies may be expelled by fumigation, and by various preparations of fly-paper and fly-water. But as these are poisonous, they are dangerous where children are about. The following is efficacious, and without risk:—Put a handful of quassia chips into a basin, and pour a pint of boiling water over them; let them infuse for a time, then strain off the liquor, and add to it two ounces of ground black pepper, and a quarter of a pound of brown sugar. Put this mixture in plates or saucers, in places where the flies are most numerous.—*Another effectual method* is:—Take a common drinking-glass and a slice of bread; wet the latter, and turn down the glass upon it, so that the rim makes a deep groove. Make a hole with your finger through the bread, trim off the waste, and spread one side of it with treacle or sugar; half fill the glass with water, and fit on the cover of bread with the treacle side beneath. The bread-trap is now ready to be placed on the places frequented by flies. Attracted by the sweet treacle, they will swarm down the hole and get caught; others following will force them into the water, and thus, in the course of the day, the glass will get full. The curious fact is that the flies cannot return through the hole. Throw the doomed flies on the fire, or otherwise effectually destroy them; if thrown on the dust-heap they will soon recover. The ordinary house-fly breeds year after year in the same dwelling; and if, in the early spring, its eggs were carefully sought and destroyed, the nuisance of flies would soon be mitigated, if not abolished. The great meat-flies, or blue-bottles, are of a different species. They breed principally in the yard or garden, live on decaying flesh and garbage, and come into the house in search of food. Whenever they alight on a piece of meat, they leave behind them an egg, which in a few hours developes into a disgusting maggot. Meat flies should, therefore, be destroyed without mercy; a simple netting of black thread will prevent them entering an open window.

Cockroaches and Crickets:—Cucumber peelings are said to destroy cockroaches. Strew the floor in that part

of the house most infested with the vermin with the green peel cut pretty thick. Try it for several nights, and it will not fail to rid the house of them.

Or, take a teacupful of well bruised plaster of Paris, mixed with double the quantity of oatmeal, to which add a little sugar; then strew it on the floor or in the chinks where they frequent, and it will destroy them.

Kitchens infested with cockroaches may be cleared by employing a hedgehog, which requires only bread and milk, and an occasional piece of raw meat or a dead bird.

Beetles may be got rid of by half filling a basin or pie-dish with linseed oil, sweetened beer, or treacle, and setting it in such places as they are accustomed to frequent. Place two or three strips of wood slantingly from the dish or basin to the floor. Attracted by the smell, the insects will venture up and be drowned on the other side. The drowned insects should be burned or crushed. An eminent naturalist tells us that his servant having removed one morning from the trap about two hundred cockroaches seemingly drowned, to make assurance doubly sure, poured over them boiling water, and then threw them in front of the house; in less than three hours the influence of the sun had revived nearly the whole of them, and they were again crawling about in full vigour. The tenacity of life in the beetle tribe is very great. Many cats will eat cockroaches, but they do not thrive on them but become thin and languid, and sometimes die—poisoned!

Or, Place quicklime in the holes of the wall whence they issue, or scatter it on the ground. For trapping them the beetle-wafers sold in the shops to poison "black-beetles" are made by mixing equal weights of flour, sugar, and red lead; but as these wafers are liable to be picked up and sucked by children, they are objectionable.

Ants.—Houses infested with ants, black or red, may be disinfected by a little attention. A sponge is one of the best things. Sprinkle it with dry white sugar: the sponge being slightly moist, it will adhere. The ants will go into the cells of the sponge after the sugar in large numbers, and can be destroyed in hot water, and the sponge squeezed out and sugared again, and returned to the closet for another haul, until all are caught.

Gnats.—These troublesome insects, which are closely allied to the terrible mosquito. Both belong to the class of creatures whose mouths are furnished with bristly stings, included in flexile sheaths. They pierce the skin by means of the proboscis, in order to feed upon the blood, and, at the same time, inject a poisonous fluid, producing considerable inflammation and swelling. Their activity usually commences towards evening, or after sunset. The Laplanders use tar-cream to prevent the insects biting them, but that could scarcely be used in this country. The common Goulard water, scented with Eau de Cologne, is a good remedy in allaying the irritation, as also preventing the attacks. Gnats seldom or never frequent rooms or houses where *chloride of lime* has been exposed.

Sting of Bees.—Although the poison a bee emits when it inserts its sting, is proved to be a highly concentrated acid, the application of all alkalies will not neutralize the acid. The more gentle alkalies—chalk, or the "blue bag," are much more likely to effect a cure, and cannot injure. The same person will be variously affected by the sting of a bee; at one time, scarcely any inconvenience will attend it; at another, much swelling; again, but little enlargement, although great pain, &c. The eye suffers considerably, though in general the uneasiness is local; but if the back of the ear be stung, there is frequently a general affection of the system; sickness, giddiness, numbness, nervous trembling, &c., &c., which will sometimes continue for hours. A draught of camphor jalap, and total repose, has been known to be beneficial.

XIII. ETIQUETTE AND MANNERS.

What is Etiquette?—Etiquette may be defined as a code of unwritten laws which govern the manners of people living in polite society one towards another. Instituted in the days of chivalry, the etiquette of gentle manners has descended to us, and all who claim a right to be considered ladies and gentlemen have a direct interest in upholding the acknowledged rules of courtesy and good taste, and preventing so far as they can, the encroachments of vulgarity and ill-breeding.

The English, like the French, Germans and others, living under a monarchical form of government, study and observe carefully what is called the Precedency of Ranks, which we here give for information :—

English Table of Precedency.

Among Men.	*Among Women.*
The King.	The Queen.
Prince of Wales.	Princess of Wales.
Other sons of the Sovereign.	Daughters of the Sovereign.
King's Brothers, Nephews, and Cousins.	Queen's Sisters, Nieces, and Cousins.
Archbishop of Canterbury.	Wives of Dukes of Blood Royal.
Lord High Chancellor.	Wives of Dukes.
Archbishop of York.	Duchesses.
Archbishops of Ireland.	Marchionesses.
Lord Privy Seal.	Daughters of Dukes.
Lord Great Chamberlain.	Wives of Eldest Sons of Dukes.
Lord High Constable.	Countesses.
Earl Marshal.	Wives of Younger Sons of Dukes of Blood Royal.
Dukes according to date of Patent.	Wives of Eldest Sons of Marquesses.
Marquesses ,, ,,	Daughters of Marquesses.
Eldest Sons of Dukes.	Wives of Younger Sons of Dukes.
Earls according to creation.	Viscountesses.
Younger sons of Dukes of Royal Blood.	Wives of Eldest Sons of Earls.
Viscounts according to date.	Daughters of Earls.
Eldest sons of Earls.	Daughters of Viscounts.
Younger sons of Marquesses.	Wives of Younger Sons of Earls.
Bishops of London, Durham, and Winchester and the other Bishops according to Seniority of Consecration.	Wives of Eldest Sons of Barons.
	Daughters of Barons.
	Wives of Knights of the Garter.
Bishop of Meath, and then all other Bishops of Ireland according to their Seniority of Consecration.	Wives of Bannerets Royal.
	Maids of Honour.
	Wives of the Younger Sons of Viscounts.
Barons according to their Patents.	Wives of the Younger Sons of Barons.
Speaker of the House of Commons.	Wives of Baronets.
Lord Commissioner of the Great Seal, (when existing).	Wives of Bannerets (if not Bannerets Royal).
	Wives of Knights of the Thistle.

Among Men.

Treasurer
Comptroller } of the Household
Master of the Horse }
Secretaries of State being under the degree of Baron.
Eldest Sons of Viscounts.
Younger Sons of Earls.
Eldest Sons of Barons.
Knights of the Garter, the Thistle, and St. Patrick (being Peers).
Privy Counsellors.
Chancellor of the Exchequer.
Chancellor of the Duchy of Lancaster.
Lord Chief Justice of the Queen's Bench.
Master of the Rolls.
Lord Chief Justice of the Common Pleas.
Lord Chief Baron of the Exchequer.
Lords Justices of Chancery.
Vice Chancellors.
Judges of the Queen's Bench.
Judges of the Common Pleas.
Judge Ordinary.
Barons of the Exchequer (if of the degree of Coif).
Judge of the Court of Probate.
Bannerets, made by the Sovereign in person under the Royal Standard, displayed in an Army Royal in open war.
Younger Sons of Viscounts.
Younger Sons of Barons.
Baronets.
Bannerets not made by the Sovereign in person.
Knights Grand Crosses of the Bath.
Knights of the Star of India.
Knights Grand Crosses of St. Michael and St. George.
Knights Commanders of the Bath, and other Orders.
Knights.
Companions of the Order of the Bath, and other Orders.
Esquires (those of the Bath and by Creation, are allowed precedence of all others).
Gentlemen (entitled to bear Arms).

Among Women.

Wives of Knight Grand Crosses of the Bath.
Wives of Knights of St. Patrick.
Wives of Knights Grand Crosses of St. Michael and St. George.
Wives of Knights Commanders of the Bath.
Wives of Knights Commanders of St. Michael and St. George.
Wives of Knights Bachelors.
Wives of Companions of the Bath.
Wives of Companions of St. Michael and St. George.
Wives and Daughters of Esquires; viz.
Wives of the Eldest Sons of the Younger Sons of Peers.
Daughters of the Eldest Sons of the Younger Sons of Peers.
Wives of Baronets' Eldest Sons.
Daughters of Baronets.
Wives of Bannerets' Eldest Sons.
Daughters of Bannerets.
Wives of Eldest Sons of Knights of the Garter.
Daughters of Knights of the Garter.
Wives of the Eldest Sons of Knights Grand Crosses of the Bath, and of St. Michael and St. George, and Wives of the Eldest Sons of other Knights of the said Orders, respectively.
Daughters of said Knights.
Wives of the Eldest Sons of Knights. Bachelors.
Daughters of Knights Bachelors.
Wives of the Younger Sons of the Younger Sons of Peers.
Daughters of Younger Sons of the Younger Sons of Peers.
Wives of Baronets' Younger Sons
Wives of Bannerets' Younger Sons.
Wives of the Younger Sons of Knights of the Bath, and St. Michael and St. George respectively.
Wives of the Younger Sons of Knights Bachelors.
Wives of Gentlemen.
Daughters of Gentlemen.
Wives of Esquires.
Daughters of Esquires.

Members of Parliament, Officers of the Army and Navy, Esquires, Doctors of Divinity, Law and Medicine, Authors, Artists, Merchants, and others not engaged in retail trade, with their wives, sons, and daughters. In public ceremonials — such as Coronations, Weddings, Funerals, the persons en-

gaged are ranged in the above order of precedency; the actual rank being often reckoned by the office held rather than by birth. The "untitled nobility" include some of the oldest of the county families, esquires, yeomen, and landed proprietors; after them come farmers, traders, operatives, and servants.

For the information of those desiring to visit or to write to persons of rank in England we give the **Modes of Address employed.**

To the Queen. — Commence your letter:—May it please your Majesty; or, Most Gracious Sovereign; or, Madam. Throughout the letter say "Your Majesty," or "Your Majesty's," instead of "you" or "yours." Conclude with the words:—I am, Madam, your Majesty's most faithful and most devoted subject, &c. The superscription is, "To the Queen's Most Excellent Majesty."

To the Prince of Wales.—May it please your Royal Highness; or, Sir. *Conclude.*—With the greatest respect, your Royal Highness's most dutiful and devoted servant. *Superscription.*—To his Royal Highness the Prince of Wales.

Other Royal Princes and Princesses are addressed in the same form.

Princes of the Blood Royal.—His Royal Highness the Duke of——; Sir; or, more formally, May it please your Royal Highness.

Archbishops.—The Most Rev. His Grace the Lord Archbishop of ——; My Lord Archbishop; or, Your Grace.

Dukes.—His Grace the Duke of ——. *Addressed as,* My Lord Duke; or, Your Grace. The eldest sons of Dukes and Marquesses take, by courtesy, their father's second title. The other sons and the daughters are styled Lord Edward, Lady Caroline, &c.

Marquesses.—The Most Hon. the Marquess of ——. *Audressed as,* My Lord Marquess.

Earls.—The Right Hon. the Earl of ——. *Addressed as,* My Lord. The eldest sons of Earls take, by courtesy, their father's second title; but the younger sons are only styled the Hon. William, &c. The daughters, like those of Dukes and Marquesses, are known as Lady Mary, &c., and are addressed as My Lady.

Viscounts. — The Right Hon. the Viscount ——. *Addressed as,* My Lord. The eldest sons of Viscounts and Barons have no distinctive titles; they, as well as the younger and the female branches of the family, are styled the Hon. Robert, Hon. Isabella, &c.

Duchess.—The Right Hon. Lady ——, Duchess of ——. My Lady.

Bishops.—The Right Rev. the Lord Bishop of ——. *Addressed as,* My Lord.

Barons. — The Right Hon. Lord ——. *Addressed as,* My Lord.

Baroness.—The Right Hon. Lady ——. *Addressed,* Madam.

Privy Councillors.—The Right Hon. Sir Henry ——. Sir.

Ministers of State.—The Right Hon. W. Ewart Gladstone, M.P., First Lord of the Treasury, &c. Sir.

Commissioners.—To the Right Hon. the Lords Commissioners of Her Majesty's Customs, &c.

Clergymen.—The Rev. Joseph ——, D.D., M.A., &c. Rev. and Dear Sir; Rev. Sir; or simply, Sir.

Legal Officials. — The Right Hon. the Lord Chancellor. My Lord.

His Honour the Master of the Rolls. Sir.

The Right Hon. the Lord Chief Justice of the ——. My Lord.

To His Honour the Vice-Chancellor of ——; or to the Right Hon. the Vice-Chancellor ——. Sir.

Puisne Judges.—On the bench only they are styled My Lord. *Addressed as,* The Hon. Mr. Justice ——. Sir.

Navy and Army.—The Right Hon. Lord Viscount ——, Admiral of the Blue. My Lord.

Vice-Admiral Sir Edward ——. Sir.

Rear-Admiral ——. Sir.

Commodore Sir Henry ——, K.C.B., &c. Sir.

Captain John ——, R.N., &c. Sir.

Lieut. Alex. ——, R.N., &c. Sir.

Field-Marshal Sir Lopez ——, K.G., &c. Sir.

General Sir William ——, G.C.B., &c. Sir.

Major-General Robert ——. Sir.

Colonel the Right Hon. Earl of ——. My Lord.

Colonel R. W ——, H.M. Regiment of——. Sir.

To Major ——, H.M. 20th Foot, &c. Sir.

Captain R——, H.M. 32nd Foot, &c. Sir.

Captain W. R——, H.M. — Dragoons. Sir.

Lieut. William ——, H.M. 42nd Foot. Sir.

Ambassadors and their Wives.—To His Excellency the Prince ——, Ambassador Extraordinary and Plenipotentiary from H.M. the Emperor of ——. Sir.

To His Excellency the Count de ——, Envoy Extraordinary and Minister Plenipotentiary from H.M. the Emperor of —— Sir.

To Her Excellency the Countess de ——. Madam.

To His Excellency the Honourable —— ——, Envoy Extraordinary and Minister Plenipotentiary from the United States of America. Sir.

To the Honourable Mrs. ——. Madam.

Public Companies.—To the Governor, Deputy Governor, and Directors of the Bank of England. Gentlemen.

To the Chairman and Directors of the —— Bank. Gentlemen.

To the Directors of the London and North-Western Railway. Gentlemen.

Civic Authorities.—The *Lord* Mayors are those of London, Dublin, and York.

To the Right Hon. the Lord Mayor of London; or, To the Right Hon. Sir R. Thompson, Lord Mayor of ——. My Lord.

To the Right Worshipful the Mayor of ——. Sir.

To the Right Worshipful J—— B——, Sheriff or Recorder of ——; or, To Mr. Sheriff ——. Sir.

To the Right Worshipful Alderman ——. Sir.

In official documents, Aldermen, Recorders, and Justices of the Peace are styled Right Worshipful.

To the Right Hon. the Lord Provost of Edinburgh. My Lord.

To the Right Hon. the Lord Provost of Glasgow. Sir.

To the Right Hon. the Lady Mayoress. Madam.

To the Right Worshipful the Mayoress of Plymouth. Madam.

Esquires.—This title is now given to all professional, legal, and other persons, as authors, journalists, artists, landed proprietors, merchants, &c.; but it belongs of right to Queen's counsel, barristers, and attorneys, and others taking the rank of gentlemen.

John Edward Lyttleton, Esq., M.D., F.L.S. Sir.

S— W—, Esq., Attorney-at-Law.

It is considered a mark of respect to add after the name of the person addressed the word "Esquire," written in full; and, where he possesses other titles, to add them, as—

Edward Bolton, Esq., C.B., &c., &c.

G. F. Parkes, Esq., F.R.S., &c.

Our own modes of Addressing Persons of Distinction.—Although we live under a Republican form of government, there are many persons who have titles to their names, and not a few who are readily offended if these be disregarded in addressing letters, &c.

A *clergyman* should be addressed Rev. ——, Rev. Sir.

A *bishop*, Rt. Rev. ——, Rev. Sir.

A *physician*, Dr. ——, or ——, M.D., Sir.

A *lawyer*, ——, Esq., Attorney-at-law, Sir.

A *Governor of a State*, His Excellency ——, Sir.

A *Member of the Cabinet*, a *Chief of a Bureau*, a *Member of Congress*, or a member of a state, senate, or house, Hon. Sir.

Etiquette for Gentlemen.—The true and standard maxim of good breeding is courtesy; you cannot be a gentleman until you constantly practise kindness and gentleness. "Thoughtfulness for others, generosity, modesty, and self-respect are the qualities which

make a real gentleman or lady, as distinguished from the veneered article which commonly goes by that name." A vulgar man has freedom without ease; a gentleman ease without freedom.

Never altogether dispense with ceremony, even among your most intimate friends. A general quiet observance of their wishes, and a desire to earn their good opinion—perfectly distinct both from stiffness and servility—will do more to win the respect and friendship of your associates than all the lavish expenditure and flattery too often used to the same end.

In making a present let it be in accordance with your known means and position, and offer it quietly and without parade. Its value should be its usefulness or beauty, and not its mere money worth.

In receiving a present do so without making extravagant speeches of thanks, as such would lead the giver to think a present from him or her was the last thing to be expected. On the other hand, let your acknowledgment be cordial and gratifying to the giver.

Never keep your hat on in a theatre, whatever part of the house you may be sitting in. It incommodes the view of those behind you, and is a certain sign of bad breeding.

In walking with a lady always place her on the side nearest the wall; and in crossing any muddy road or path you lead the way, except in the case of a crowded road, when you should give the lady your arm to conduct her across. In such a case, unless you were walking arm-in-arm before, relinquish it when you have crossed.

In walking alone, keep to the right.

If a lady inquire the way, inform her, if you can, in as few and simple words as possible; but do not, unless the way be difficult to find, or very near, presume to show her, as she very naturally would not like to walk by the side of a stranger. This remark does not apply to old ladies or very young girls.

Avoid loud laughter or loud conversation in all public places, and in the street.

Should you accidentally come in collision—or jostle against—with any person in the street or elsewhere, apologize instantly, even though you were the offended party. The offence was, in all probability, unintentional, and you also may have been in some measure to blame.

In speaking of one gentleman to another, never, unless you both know him very intimately, speak of him in any other way than as Mr. ——; and never, on any account, use the initial of his or her name, as Mr. C——, Miss J——.

In introducing persons to each other, present the gentleman to the lady; and, where both are of the same sex, the inferior in rank or position to the superior or elder. Always, when making the introduction, speak the names correctly and distinctly, and take care that each comprehends the name of the other.

When introduced to a lady, or a superior in position or age, do not attempt to shake hands, but simply bow; the advance, if made, must come from the other side.

In meeting a friend accompanied by a lady, bow to him, and always raise your hat.

Two gentlemen walking together, and meeting a lady known only to one, should both raise their hats.

When you meet a lady in the street, turn and walk with her rather than stand.

In morning calls it is usual to leave your card when the family are announced as "Not at home."

The bearer of a letter of introduction should deliver it personally, accompanied by his card. In giving a friend a letter of introduction, be careful to leave it unsealed.

When you receive a letter of introduction, if sent by post, acknowledge it immediately; but, if the lady or gentleman introduced bring it in person, courteously receive her (or him); and then, if you wish to continue the acquaintance, give an invitation for another day.

In meeting a lady in the street you must not notice her unless she first bows. This is imperative, except in the case of familiar acquaintances. On leaving a lady always bow and raise your hat.

On meeting a male friend, shake hands; an acquaintance, bow, or raise the hat; to one much your superior, do both.

Always be punctual; never make an appointment you cannot keep; and never break one unless from positive inability; and, in the latter case, apologize.

At dinners never be late; at evening parties punctuality is not so important.

In paying a mere visit of ceremony, do not call before two or after five in the afternoon; this general rule must, of course, be altered occasionally as circumstances dictate; and, unless invited for any particular purpose which will detain you, take your hat into the room with you. If any other visitor is in the room, the first visitor should leave early.

On calling at a house to inquire after a sick friend or acquaintance, send in your card, and wait till the servant informs you of the state of his health; then immediately leave.

On no account enter a room—unless shown in by the servant or your friend meets you at the door—without first knocking and obtaining permission to go in.

In paying an evening visit, should there be other people at the house, go in, but do not stay long, even if pressed to do so, unless on intimate terms.

In dress be quiet, neat, and fashionable, without going to extremes. Equally avoid singularity, staring colours, and large patterns. Neither dress above or below your station; and always suitably to the time of day.

Whenever you appear in public, wear gloves.

It must be clearly understood that marriage puts a stop to all former acquaintanceships a man may have had, unless cards are sent—except in such cases where none are issued.

Be polite without being foppish, conciliatory without being servile, considerate without being anxious, truthful without being indiscreet, just without being severe, and generous without being lavish.

The Etiquette of the Dinner-table is a matter that can scarcely be taught. Be punctual in arriving, courteous and quiet while dining—moderate both in speech and in appetite. Only partake once of soup or fish; take no wine or beer with soup; do not eat fish with a knife (unless fish-knives and forks are provided), but use the fork in your right hand, and a small piece of crust (which leave on the plate when done with) in your left; always break your bread, not cut or bite it; when a plate is handed to you, keep it, and, without undue haste, commence eating without reference to the others. It is usual to help the guests in regular order. In the matters of finger-glasses, dessert, &c., &c., "do at Rome as the Romans do."

In the matter of giving dinners, do not invite more than you have comfortable accommodation for; be punctual in having dinner served, as waiting long in the drawing-room is most tedious; be liberal without profusion or crowding; be cool-tempered and at your ease, for nothing is more annoying to the guests than to have the faults of servants or children talked of, or the delay—which even with the greatest care does sometimes occur—commented upon.

The hostess must be in the drawing-room at the appointed hour to receive her guests, and should, by the exercise of tact, endeavour to set up a perfect understanding between them, and alleviate, as far as possible, the tediousness of the "drawing-room conversation."

On going down to dinner the host escorts the lady who is highest in rank or position, or to whom the greatest deference is due; he then seats her on his right hand, and intimates, quietly but distinctly, where the rest shall sit. He should not seat relations—except man and wife—together, nor two of a sex, or profession, except

where it is unavoidable. The host and hostess occupy the top and bottom of the table, the two most distinguished lady guests sitting on either side of the former, and the hostess being supported by the gentlemen of most consideration. Gloves should be worn in the drawing-room, and removed immediately upon taking your seat at the dinner-table.

Eat peas, currant-jelly, and all sorts of thick sauces with your fork. Use your dessert-spoon in eating curries, various of the softer made-dishes, puddings, and tarts; the latter it is usual to eat with a dessert-spoon and fork, the latter being in the left hand. In helping sauce or vegetables, do not put them over the meat, but carefully just within the hollow of the plate.

When dessert is served, assist the lady next you to some of the choicest of the fruit.

The following, from a very recent book of etiquette, is curious, and hardly necessary for our readers:—

"Never smack your lips nor chirp with your mouth at or after dinner. Don't pick your teeth, nor insert your finger in your mouth. Use the butter-knife, not your own, when you help yourself or others to butter. Put the *débris* of fish, fowl, or meat on the corner of your own plate, not on any other, nor on the table-cloth. Do not be supplied with more than you can eat; you will thereby avoid leaving a portion on your plate. If a junior in the company, do not speak much, nor attempt to lead the conversation. Do not carry anything to your mouth with a knife. If you cough, place your handkerchief to your mouth. If you have occasion to use your handkerchief, do not look at it afterwards."

"Do not ask anyone at table to assist you if there is a servant in attendance.

"Never ask to be helped twice to the same dish, nor make remarks on quality or price of the articles on the table.

"Always use the proper glass for each particular wine you drink.

"Do not speak or drink with your mouth full.

"If asked by any of the company to drink wine, always replenish your glass from the decanter, and bow. This custom is, however, almost out of date.

"Never pick a bone with your finger."

In accepting invitations, write at once.

Always go in evening dress to dinner parties.

After a party call, or leave your card, within a week.

The mode of serving dinner—what to give, how to carve and help it, as well as how to make and cook it—will be found under the section "Domestic Cookery."

Etiquette in Travelling. — Do not take a seat in a railway-carriage or coach which you see has been engaged by any personal article being placed upon it, in consequence of the temporary absence of the occupier.

Do not whistle or hum offensively, nor make a noise with your stick, umbrella, or feet on the floor of the carriage.

Avoid smoking, unless you are in a smoking compartment, and not even then, without permission, if a lady be present. Avoid spitting.

Do not put your foot on the opposite cushion, nor open or close the window if against the prevailing wishes of your fellow-travellers.

Do not talk loudly, especially for any lengthened time, when others are present. This is a most irritating habit—most travellers prefer to travel quietly.

The weather side of the carriage is that on which the rain beats or wind blows, and you can always claim to have that window shut. He who sits with his face to the engine, next a window, has usually the first claim or option of having it shut or open, unless the latter interferes with the comfort of the other passengers.

Always open the door for a lady, and assist her in getting out and in.

Never bribe railway-porters or guards.

Avoid the use of the words "gent" or "party."

If you have more newspapers than

one, or having perused the only one you have, offer it to your neighbour.

Avoid placing your feet or legs in the way of your opposite fellow-traveller.

Never insist on getting into a compartment which is full, but ask permission to enter, if other parts of the train are full.

If you are cultivating a moustache, avoid constantly trimming it with your fingers.

It need hardly be said, never swear nor use profane language.

Never insist on speaking to a fellow-traveller if he shows a disinclination to continue the conversation.

If a lady enters a compartment that is full, offer her your seat, and stand until another passenger leaves.

Never irritate a person who is the worse for liquor, and avoid conversation with him. If a lady is annoyed, you are bound to interfere for her protection.

Avoid interfering in the quarrels of relations or of husbands and wives.

If on a long journey, with one or more in the same compartment, better to exchange a few commonplace observations than preserve a demure silence and attitude.

Do not fill up the seats with your portmanteau or carpet-bag, if they are likely to be required.

Do not take a dog into the compartment without permission of the other passengers.

When you enter a carriage, do not hold up your umbrella or stick, nor thrust it out—you are apt to injure others. Carry it suspended in your hand, and avoid placing it on the foot of any passenger when you get seated.

Make yourself always agreeable and obliging; this will generally secure you an immediate return of good feeling and urbanity.

Etiquette for Young Girls.—The motto of William of Wycham is, "Manners make the man." Manners, too, frequently make or destroy the happiness of *women* more than we can imagine; and what the young girl is, the woman is almost sure to become. Manner is, indeed, of infinite consequence, for it is an index of the mind. The professor of calisthenics and the dancing-master may drill the body into easy and graceful movements; but what will these be if the actions lack courtesy, and the words gentleness.

A polite child should enter the room with a bow or courtesy, which is the customary mode of showing respect to strangers. She ought to go up to those who speak to her, answer their questions clearly and distinctly, and then sit down quietly. She may hand round cakes, and make herself generally useful and agreeable; she should, in fact, be seen but not heard, and certainly never take notice of any peculiarity in the dress, appearance, or manner of the visitor.

Young ladies should always be civil to servants or inferiors, and always polite when asking anything of them. Haughtiness and ostentation should be avoided.

Ladies' Toilet.—The hair should be carefully attended to, brushed night and morning, and kept clean; a little oil may be rubbed into the roots occasionally; and ought to be frequently cut, to prevent the ends from splitting.

The nails should be kept clean with a brush and cut nicely, the skin at the roots being rubbed back every time the hands are washed.

The teeth being a great ornament to the face, and of unquestionable value, should be carefully attended to; wash with a brush after each meal with tepid water, or occasionally rub with a fine towel. Notice the first appearance of decay, and have it stopped by a good dentist.

Etiquette for Ladies.—It is absolutely essential that a lady should conform strictly to the usages and rules of society, and what in a gentleman would be a venial offence against good taste and good breeding, would bring ridicule upon a lady moving in the same class.

Therefore, it is indispensable that a lady should observe all proper forms and rules, without being either ceremonious or fastidious—avoiding alike

affectation and vulgarity, prudery and insincerity.

Be moderate in everything, and never try to appear anything but what you are; be gentle and affable, and never seek to win by any other weapons than simplicity, honesty, dignity, and gentleness.

Dress neatly and plainly before dinner, and, even when full-dressed, avoid all extremes of fashion and ornament.

On no account appear, even to breakfast, in those hideous abominations called curl-papers. If you use them, take them out of your hair before presenting yourself.

Upon a first introduction, whether to a lady or a gentleman, and even until the acquaintance be intimate, a graceful inclination of the head is all that etiquette demands.

In travelling, should a gentleman address you respectfully and courteously, you may politely but coolly reply; but such acquaintanceships must invariably cease where they commence. If the manner of speaking to you be in any way wanting in consideration and respect, preserve absolute silence, and, as soon as possible, move away.

If you are in any difficulty do not hesitate to apply to any gentleman for assistance, but be careful to word your request in the plainest and simplest terms, combining politeness with prudence.

In ordinary friendly calls, dispense as far as possible with ceremony and formality, without overstepping the bounds of propriety and self-respect.

If the person you are visiting be preparing to go out, or to sit down to table, leave quickly, even if invited to remain.

A visit of ceremony should not last more than a quarter of an hour, and you should not remove either bonnet or shawl. You should retire easily and quietly, as soon as possible after the arrival of other visitors, but do not let it appear that their arrival is the cause. When they are seated, take leave of your hostess, and bow to the guests.

Children, dogs, and other *impedimenta* (!) must not be taken with you on visits of ceremony, though, of course, among intimates this hard and fast rule is greatly relaxed.

In walking through the street be careful to walk neither too fast, which is ungraceful, nor too slowly, which is indecorous.

On receiving a visit of ceremony, rise and advance, offering your visitor, or visitors, seats, and then give your entire attention to them until the short visit is at an end, being careful neither to flatter nor to neglect your guests. On a ceremonious visit it is not the custom, unless the visitors are from the country, to offer refreshment, but this rule varies. When your visitors rise to leave, ring the bell for the servant to open the street-door, and accompany them to the door of the room and no farther.

Punctuality in returning visits is absolutely necessary.

A married lady had better not speak of "My husband," but "Mr. ——;" and should observe the same rule in speaking to lady friends of their husbands. Never address a young lady as "Miss," without the addition of the name; but say "Madam," or "Miss ——."

In meeting a gentleman in the street whom you desire to recognise, bow slightly, but do not stop. He will then, if the acquaintance warrant it, turn and walk with you for a few yards. A lady is not obliged by etiquette to recognise a gentleman in the street if she does not wish to do so.

If a lady meet a gentleman in the country, or in a park or square, she may, however, stop and speak. The rule as to this must, of course, be regulated by the intimacy of the acquaintance.

Letter Writing. — A letter should be polite, courteous, clear, simple, and written with appropriateness to the subject. A good legible handwriting is an essential accomplishment.

Use good, but plain and undecorated paper and envelopes, avoiding the extremes in the sizes of envelopes.

Do not be more formal than is absolutely necessary, but keep studiously from the vulgarity of a "free-and-easy" style.

Remember that a written letter is an important document, and a harsh word or expression contained in it may be a lasting annoyance, or worse.

In all cases put the date and address on the letter, as well as the name of the person addressed, and let your signature be plain and distinct.

In writing to a stranger on any matter requiring a reply, enclose a stamped addressed envelope.

Do not use wafers—wax or adhesive envelopes are more respectful, and in good taste.

Commence your letter—"Sir," or "Madam;" and, if more intimate, "Dear Madam," or "Dear Miss——." A lady should not address a gentleman other than as "Sir," unless the acquaintance is both long and intimate.

Conclude—"I am, Sir;" or "I am, Madam, yours sincerely;" or, more familiarly, "I am, dear Mrs. ——, very sincerely yours."

Ceremonious notes, written in the third person, should be brief and to the purpose. Do not sign such notes. or use the first person anywhere in them.

Etiquette of the Ball-room.—On entering you must, in the first place, find your hostess and make your obeisance. A gentleman must not dance frequently with one lady, nor must he engage her too many dances in advance. In private balls where there are no programmes, engagements should not be made until the dance is announced. In private balls, also, a lady has no option but to dance when asked, or sit out that dance. When the dance is over, the gentlemen takes the lady to a seat, or offers her refreshment. Where there is a regular supper, the gentleman must take down his last partner, and sit beside her; or, if there be only room at the table for the ladies, he finds her a seat, and stands behind her. If, however, the hostess request him to take down another lady, he must do so, first finding an escort for his last partner. The time for making your appearance at a public ball varies according to the fashion and custom of the place; you cannot do wrong, however, by presenting yourself between ten and eleven. For a private ball, the invitations usually specify the time. Your dress must be simple but elegant; and remember, that to married ladies only belongs the privilege of attiring themselves in those elaborate ball costumes which are at once the delight and envy of their younger sisters.

Evening Parties.—At these, as well as at balls, a room must be provided by the hostess for the unrobing of her lady guests. The ordinary but delightful amusements of dancing, music, and singing are proceeded with under the mild despotism of the host and hostess. When private theatricals are given, the ladies invariably have the front seats. The hostess usually commences the dancing with the greatest stranger, or the most honoured guest. In leaving make as little fuss as possible, bowing slightly, if either be close to you, to the host or hostess, but making no other sign of departure. When, however, there is a general break-up, your leave-taking may be more marked. Do not omit to call and express your thanks and gratification to your hostess. This call should be made some morning within a week after the entertainment.

The Etiquette of Courtship.—It is useless here to attempt any supervision or dictation on "choice" and "selection;" and we can only say that careful but delicate and private inquiry must be mutually made, and an introduction obtained either through some mutual friend, and a relative—as brother, father, or uncle—of the lady. On no account should the introduction be obtained in any other way. There are hundreds of proper and acknowledged means of bringing young people together,—as balls, parties, pic-nics, &c.—without resorting to any violent or presumptuous methods.

Domesticated habits personal neat-

ness, a sound knowledge of cookery and the other domestic arts, and good taste are above all the merely ornamental accomplishments.

And, as to the conduct of one towards the other, let the young man be sincere, gentle, and considerate, and the girl confiding, single-hearted, kind, and discreet; and their own hearts will tell them better than any set forms or rules how to please and to be just to each other. Let neither be over-warm nor over-cold; let the lady respond to the gentleman's advances, and do no more; and let mutual confidence grow with mutual esteem and love, till the time comes when the man feels he may with some confidence plead his cause with the fair enslaver.

It has been well said that an offer of marriage is the highest and purest compliment a man can pay to a woman; and, therefore, it should be treated with the greatest consideration.

When a proposal is made which cannot, from any real and sufficient reason, be accepted, let the refusal be gentle but firm, and if there be any real bar—as a prior engagement—let it be said delicately, but at the same time unmistakably. Where the cause of the refusal is simply on the account of "lack of love," no definite reason need be given, but the refusal must still be most courteous and gentle. And here a word to the ladies:—More lives have been wasted, more misery and heart-ache caused, more desperately foolish resolves made, and projects carried out, through light and causeless refusals than from all the ill-assorted marriages in the world. It is a woman's duty, when an offer of marriage is made to her, to take *all* the circumstances of the case into earnest consideration; to weigh every tittle of evidence for and against her lover; to remember that his happiness is doubtless resting on her reply; that of all women he has chosen her; and then, if she feel herself forced to refuse, let her be brief, be candid, be firm, be compassionate.

If she can accept, let her allow no false modesty stay her lips, but, with all delicacy and candour, avow her preference. Remember—

"True love's the gift which God has given
To man alone beneath the heaven.
* * * * *
It is the secret sympathy,
The silver link, the silken tie,
Which heart to heart, and mind to mind,
In body and in soul can bind."

No man should content himself with simply an avowal of love, but he should distinctly and in terms offer marriage; he may be as eloquent as he pleases, but there must be no possible doubt or misinterpretation of his meaning. A model proposal was that of Verdant Green:—"Patty—my dear Miss Honeywood—I love you! Do you love me?" followed directly by a confidential and loving talk of marriage and future arrangements.

Long engagements are most undesirable, as oftentimes the lady gets weary of the monotonous dulness of her life, shut out, as she must be, from a great deal of the amusement in which her sisters and friends indulge. She is like a picture in a gallery with the ominous word "Sold" upon it; people admire it with a sort of envious restraint, thinking all the time the purchaser had better take it away to grace his own home.

When an engagement has fairly commenced, the gentleman should, by every means in his power—avoiding fussiness and conspicuous attention—endeavour to strengthen in the lady's heart the love and respect for him which caused her to accept his proffered hand. He should let every one see, by his manly and chivalric deference to her lightest wish or inclination, their relative positions; and, at the same time, avoid all appearance of "possession," or of monopolizing her time or thoughts. No woman likes to seem constrained to devote all her attention to her lover, no matter how much she really cares for him. Let there, however, be no neglect, no broken appointments, no unpunctuality, no paltry excuses: remember that, whatever is apparent, an engaged girl is constantly thinking of her future. And it is natural she

should do so, for, notwithstanding all that is said of "woman's rights," her position in life is clear and evident; and what higher honour is possible in this world than to be man's helper, to whom he turns at every trouble, whose smile is his best reward, whose kiss his greatest incentive? What brighter prospect is possible than to possess the power to win over by a kind word, and to establish a man wavering between right and wrong?

It is the gentleman's prerogative to urge on the time for the marriage, but to the lady exclusively belongs the right of fixing the exact day. This important point being settled, the domestic arrangements as to the future home of the young couple, &c., are made; and it is usual for the lady's mother to provide the table-linen, house-linen, &c., and the future husband the house and its furniture.

Choice of a Husband.—As few ladies are privileged to initiate proposals in reference to spouses, directions may only be given with respect to the acceptance of *offers*. Do not encourage the advances of a gentleman who is believed to have jilted a lady; you owe this to your sex and to society. Never believe any one whose protestations of love are intense at first sight; you may better judge the sentiments of the man who loves you by his manner than by his words. Should a gentleman select you for attentions in preference to others, you are justified in recognising his kindly disposition; with a little encouragement he is likely to become your lover. Do not coldly reject the advances of any respectable person who honours you with his proposals; the timid suitor may prove a most worthy one, and anyhow you owe an acknowledgment of courtesy to all who indicate towards you respect, or friendship, or affection. Your good sense will teach you to prevent any one whom you do not intend to marry prosecuting his advances so far as to necessitate your giving him a repulse. If a handsome present is sent you by a gentleman whom you cannot accept as a lover, return it at once, with a frank expression of your appreciation, accompanied by a regret that you cannot retain so valuable a gift. In general you may look with favour on those gentlemen whom your papa invites frequently to his table, and mamma rejoices to introduce to her evening parties. If a suitor is known to be intemperate, or is understood to be fast in his habits, reject his offers, and on no account be entrapped by his professions of reformation. He is not a hopeful lover whose tastes even verge on dissipation. His habits may improve, but do not stake your happiness upon the chance. Do not despise a lover because he is poor,—but if he is poor and lacks application, he will not suit you as a husband. "I propose to marry your daughter," said a young medical practitioner to a citizen who had amassed a fortune by industry. "Marry my daughter, sir? what have you got to keep her with?" "My lancet only," said the young physician, "but I mean to use it." "You shall have her," said the father, struck by the young man's expression of decision.

Let our young lady readers attend to these parting hints. 1. Let your accepted lover be some years your senior; you will respect him all the more hereafter. 2. Do not marry a vulgar rich man; he will not elevate you much in the social world, and any little advantage in this way will be more than negatived by your having to endure manners which are unpleasant to you. 3. Break off an engagement with a suitor who proves of fitful humours—cheerful to-day, and moody or morose to-morrow. How could you spend a lifetime with one of moods so variable! These are too often premonitory of chronic ailment, some disease of the brain.

Choice of a Wife.—Marriage is the most important step in life. An imprudent union is the cause of life-long misery, while a judicious alliance is the greatest of temporal blessings. He who marries rashly is a fool. Early marriages are to be recommended where the parents of both parties are satisfied, where there are proper means

of support, and where the young lady is of prudent and economical habits. As a rule, a man under twenty-one should not venture upon matrimony, and no time has been lost should he not marry till thirty. In choosing a wife, every man should be guided by such counsels as these:—1. Remark the lady's temper. No extent of accomplishments will compensate for the lack of amiability. A lady who answers her mother petulantly will prove a thorn in her husband's pillow. If she quarrels with her companions at school, she will certainly scold her servants and vex her children. If she is susceptible of slights before marriage she will after it be liable to jealous humours and other unpleasant freaks. 2. Beware of flirts. A girl who bids for admiration, and has smiles for every one, should be met upon her own terms. Marriage with the heartless is not to be thought of. 3. Never dream of marriage with one of extravagant habits. A clergyman bent on marriage dined with a friend who possessed three marriageable daughters. Before dinner he had been at a loss as to which of the young ladies he should propose to. Towards the close of the meal cheese was produced, and each of the three sisters took a portion. Before eating, the first pared her morsel, the second scraped hers, and the third took the cheese just as it was. The visitor was no longer at a loss: he proposed to the lady who, cleanly without being extravagant, scraped her cheese. Let every suitor carefully remark as to his admired one's views concerning domestic expenses and personal attire; if in the parental home she is heedless of outlay, he may be satisfied that her profusion will be boundless when she is admitted into her own. 4. The lady who exhibits sordid inclinations is unsuitable as a wife; she would introduce meanness at your family hearth, and your friends would not invite her to their homes. If the object of your affections has a wise father and a discreet mother, you may make your proposals with full confidence that, should your suit prevail, your future partner will be "a crown to her husband."

Dress of the Bride.—This is of course, much regulated by fashion; but white or light-coloured material, with lace veil and orange flowers, is considered the most appropriate.

Dress of the Bridegroom.—Ordinary morning costume, or black coat and trousers, and white waistcoat and neckcloth. Satin waistcoats and ties are not thought proper on the occasion. The groomsman should be similarly attired.

Dress of the Bridesmaids.—Unmarried ladies usually act as bridesmaids; they should be costumed in light silk, with flowers and ribbons to match. To them is assigned the duty of cutting up the bride-cake, and generally taking charge of the wedding breakfast and the guests.

Wedding Guests generally appear in the morning costume worn at concerts, &c. It is usual for some of them to attend the church, but they seldom go except by invitation.

Bright and gay morning costume is the most suitable style for gentlemen, and white or very light dresses for lady guests. The customary evening dress for gentlemen is, however, perfectly admissible.

Wedding Cards.—Though fashions are continually changing with regard to wedding-cards, the plainer they are the better. Silver-edged cards, or cards tied together with a silver cord, are quiet and pretty. Sometimes one card only is used, with the names Mr. and Mrs. —— on it, or the lady's card, with her maiden name, is also placed in the envelope.

The bridesmaids are entrusted with the forwarding of the cards and bride-cake to the friends of the young couple, and a day is usually named on the card on which to receive their congratulations "At Home."

A much-to-be-commended fashion has of late years been largely adopted of dispensing with the use of wedding-cards. When this is so, the friends

are at liberty to call as soon as they please after the return from the honeymoon. These various calls, whether by invitation, or simply as morning calls, must be returned by the bride and bridegroom; or, if that is not possible, by the bride and her chief bridesmaid; and, with the return of these visits, the ceremonial congratulations and thanks come to an end.

THE LANGUAGE OF FLOWERS.

In various countries the language of flowers—or rather, intimations conveyed from person to person by means of combinations of flowers—is well understood.

"In Eastern lands they talk in flowers,
And they tell in a garland their loves and cares;
Each blossom that blooms in their garden bowers,
On its leaves a mystic language bears."

The following list of flowers and their sentiments will enable anyone to understand the system :—

Flowers.	*Sentiments.*
Acacia, Rose	Platonic affection
„ White or Pink	Elegance
„ Yellow	Secret affection
Acanthus	Artifice
Amaranth	Unchangeable
Amaryllis	Pride
Anemone	Sickness
Apple Blossom	Temptation
Arbor Vitæ	Unchanging friendship
Arune (Wake Robin)	Ardour in pursuit
Auricula	Painting
„ Scarlet	Avarice
Bachelors' Buttons	Single blessedness
Balm	Sympathy
Basil, Sweet	Hatred
Bay Leaf	I change but in dying
Bay Tree	Glory
Bay Wreath	Reward of merit
Bee Orchis	Industry
Belladonna	Silence
Betony	Surprise
Bindweed	Humility
Birch	Gracefulness
Birdsfoot, Trefoil	Revenge
Bittr. Swt. Nightshade	Truth
Blackthorne	Difficulty
Blue Bell	Constancy
Blue Bottle (Centaury)	Delicacy
Box	Stoicism
Bramble	Envy, Remorse
Broom	Neatness
Bryony	Prosperity
Bulrush	Docility
Bur	Importunity
Buttercup	Childishness, riches
Butterfly Orchis	Gaiety
Cactus	Warmth
Camellia	Unpretended excellence
Candy Tuft	Architecture
Canterbury Bell	Acknowledgment
Cardamime	Paternal error
Carnation	Woman's love
„ Striped	Refusal
„ Yellow	Disdain
Centaury	Felicity
Chamomile	Energy in adversity
Cherry Tree	Education
Cherry, White	Deception
Chestnut	Luxury
Chickweed	Rendezvous
Chrysanthemum, Red	I love
„ „ White	Truth
„ „ Yellow	Slighted love
Cinquefoil	Beloved daughter
Cistus, or Red Rose	Popular favour
Clematis	Mental beauty
„ Evergreen	Poverty
Clover, Red	Industry
Cloves	Dignity
Cockscomb	Singularity
Columbine	Folly
„ Purple	Resolute
„ Red	Anxious and trembling
Coriander	Concealed merit
Cowslip	Pensiveness
Cranberry	Cure for heart-ache
Cresses	Stability
Crocus	Abuse not
Crow Foot	Ingratitude
Currants, Bunch of	You please all
Cypress	Mourning, despair, death
Dahlia	Instability
Daisy	Beauty, innocence
„ Double	Participation
„ Michaelmas	Cheerfulness in old age
„ Red	Beauty
Dandelion	Oracle, coquetry
Dittany	Birth
Dock	Patience
Dog's Bane	Deceit
Dragon Plants	Snare
Ebony	Darkness
Eglantine (Sweet Briar)	Poetry
Elder	Zealousness
Elm	Dignity
Endive	Frugality
Everlasting Pea	Lasting pleasure
Everlasting Thorn	Solace in adversity
Feunel	Force
Fern	Sincerity
„ Flowering	Fascination
Flax	Domestic industry

Flowers.	*Sentiments.*
Forget-me-not	Forget-me-not, true love
Foxglove	Insincerity, *a wish*
Gentian	Virgin pride
Hawkweed	Quicksightedness
Hawthorn	Hope
Heart's Ease, Purple	You occupy my thoughts
„ Wild	Live in idleness
Heath	Solitude
Heliotrope	Devoted to you
Hellebore	Calumny
Hemlock	You will cause my death
Hemp	Fate
Holly	Foresight
Honeysuckle	Bond of love
Hop Blossom	Injustice
Horse Chestnut	Luxuriance
Hyacinth	Sport, amusement
Indian Cress	Resignation
Iris, Yellow	Passion, fire
Ivy	Friendship
Jasmine, or Jessamine	Amiability
Jonquil	Affection
King Cup	Wish to be rich
Laburnum	Forsaken
Larch	Audacity
Larkspur, Double	Haughtiness
„ Pink	Fickleness
Laurel, Mountain	Ambition, glory
Lavender	Distrust, assiduity
Lemon Blossom	Fidelity in love
Lilac, Purple	First emotions of love
„ White	Modesty
Lily, White	Purity and sweetness
Lily of the Valley	Return of happiness
Lime, or Linden Tree	Conjugal fidelity
Lion Wort	Confidence
Lobelia	Arrogance
London Pride	Frivolity
Lotus Flower	Estranged love, silence
Love in a Mist	Perplexity
Love Lies Bleeding	Hopeless, not heartless
Lucern	Life
Lupine	Voraciousness
Lychnis	Religious enthusiasm
Madder	Calumny
Maid Wort	Tranquillity
Magnolia	Love of nature
Maiden Hair (Fern)	Discretion
Maize	Plenty
Mallow	Mild disposition
Mandrake	Rarity
Maple	Reserve
Marjoram	Blushes
Marsh Mallow	Humanity
Marygold	Chagrin, pain
„ African	Vulgar-minded
„ Garden	Jealousy & uneasiness
Mignonette	Your qualities surpass your beauty
Mint	Virtue
Mistletoe	Obstacles to be overcome
Moss	Ennui, *recluse*
Mountain Ash	Prudence
Mulberry Tree	Wisdom
Mustard Seed	Indifference
Myrtle	Love
Narcissus	Self-esteem
Nastertium	Patriotism
Nettle	Cruelty, slander
„ Stinking	Slander

Flowers.	*Sentiments.*
Nightshade	Sorcery, witchcraft
Oak Leaf	Bravery
Oats	Music
Olive	Peace
Orange Tree	Generosity
Orange Blossom	Your purity equals your loveliness
Ox Eye	Patience
Osier	Frankness
Pansy (Heart's Ease)	You occupy my thoughts
Parsley	Feasting
Passion Flower	Belief
Pea, sweet	Respect
Peach Blossom	I am your captive
Pear Tree	Affection
Penny Royal	Flee away
Peony	Anger, a frown
Periwinkle, Blue	Pleasure of memory
Peruvian Heliotrope	Intoxicated with pleasure
Pheasant's Eye	Sorrowful remembrance
Phlox	Unanimity
Pimpernel	Change, assignation
Pink	Boldness
„ Carnation	Woman's love
„ Indian Double	Always lovely
„ Variegated	Refusal
Plane Tree	Serious
Plum Tree	Perform your promises
Polyanthus	Pride of riches
„ Lilac	Confidence
Pomegranate, Flower	Mature elegance
Poppy, Red	Consolation
„ Scarlet	Fantastic extravagance
Primrose	Early youth
„ Evening	Inconstancy
„ Red	Unpatronized merit
Privet	Defence
Queen's Rocket	Fashionable
Ragged Robin	Wit
Ranunculus, Garden	Rich in attraction
Rocket	Rivalry
Rose, Cabbage	Love's ambassador
„ Champion	Deserve my love
„ Christmas	Relieve my anxiety
„ Damask	Youthful Love
„ Deep Red	Bashfulness
„ Guelder	Touch of life
„ Moss	Confession of love
„ Musk	Capricious beauty
„ Cluster of	You charm me
„ Red (bud)	Youth and beauty
„ „ (full)	Beauty
„ Thornless	Ingratitude
„ White	Heedless of love
„ „ (withered)	Forgetfulness
„ York & Lancaster	Union of sentiment
Rue	Disdain
Rush	Docility
Saffron	Marriage
Sage	Esteem
Saint John's Wort	Animosity, superstition
Scabious, Sweet	Widowhood
Scarlet Lychnis	Sunbeamed eyes
Shamrock	Light-heartedness
Snap Dragon	Presumption
Snowdrop	Refinement
Sorrel, Wild	Wit ill timed
Southernwood	Jest, bantering
Spearmint	Warmth of sentiment
Speedwell	Fidelity

Flowers.	*Sentiments.*
Star of Bethlehem	Guidance
Star Wort	After-thought
Star Wort (Michaelmas Daisy)	Welcome to a stranger
Stock (Gilly Flower)	Lasting beauty
Straw (broken)	Rupture
„ (whole)	Union
Sunflower	Haughtiness
Sweet Basil	Good Wishes
Sweet Briar (Eglantine)	I wound to heal
Swt. Sultan (Centaury)	Felicity
Sweet William	Gallantry
Sycamore	Curiosity
Tansy	Resistance
Ten-week Stock	Promptitude
Thistle, Common	Austerity
„ Scotch	Retaliation
Thorn, Branch of	Severity
Throat Wort	Neglected beauty
Thyme	Activity
Traveller's Joy	Safety
Tree of Life	Old age
Tulip, Red	Declaration of love
„ Variegated	Beautiful eyes
„ Yellow	Hopeless love
Venus's Looking-glass	Flattery
Venus's Fly-trap	Deceit
Verbena	Sensibility
Vine Leaf	Intoxication
Violet	Faithfulness
Wallflower	Fidelity in misfortune
Wheat	Prosperity
Willow	Freedom
„ Weeping	Forsaken
Woodbine	Paternal affection
Woodsorrel	Joy in absence
Wormwood	Sorrow in absence
Xanthium	Rudeness
Yew	Sadness
Zinnia	Absence

The first principle to be observed in the construction of the floral love-letter is that the pronoun *I* or *me* is expressed by inclining the flower to the left, and the pronoun *thou* or *thee* by sloping it to the right; but when represented by drawings on paper, those positions should be reversed, as the flower should lean to the heart of the person whom it is to signify. The articles *a*, *an*, and *the* may be expressed by tendrils—the first by a single tendril, the second by a double tendril, and the third by one with three branches.

The second rule is that, if a flower presented upright expresses a particular sentiment, when reversed it has a contrary meaning. Thus, for example, a rose-bud upright, with its thorns and its leaves, means, "I fear, but I hope." If the same bud is returned, held downwards, it signifies, "You must neither hope nor fear." But, if the thorns be stripped off, it expresses, "There is everything to hope." Deprived of its leaves it signifies, "There is everything to fear." Thus the expression may be varied of almost all the flowers by changing their position. The flower of the marygold, for example, placed on the head, signifies "Trouble of spirits;" on the heart, "Trouble of love;" on the bosom, "Weariness." The pansy, held upright, denotes "Heart's ease;" reversed, it speaks the contrary; when presented upright it is understood to say, "Think of me;" but when offered pendant, it means, "Forget me." And thus the amaryllis, which is the emblem of pride, may be made to express "My pride is humbled," or "Your pride is checked," by holding it downwards, either to the left or the right, as the sense requires. In the same manner, the wallflower, which is made the emblem of fidelity in misfortune, if presented with the stalk upwards, would insinuate that the person was considered no friend to the unfortunate.

COMBINED AND COMPOUND SENTIMENTS.

Sentiments.	*Flowers.*
Anxious and trembling	Red Columbine
Esteem and love	Strawberry Tree
Grace and eloquence	Yellow Jasmine
Pleasure and pain	Dog Rose
Purity and sweetness	White Lily
Beautiful eyes	Variegated Tulip
Beloved daughter	Cinquefoil
Good wishes	Sweet Basil
Rejected addresses	Ice Plant
Retirement enjoyed	Hare or Blue

PERSONAL SENTIMENTS.

Sentiments.	*Flowers.*
I change but in dying	Bay Leaf
I desire to please	Mazereon
I feel all my obligations	Lint
I live for thee	Cedar
I love	Red Chrysanthemum
I wound to heal	Eglantine
I am for ever thine	Dahlia
I am poor but happy	Vernal grass

Sentiments.	*Flowers.*
I am resolved to win	Purple Columbine
I am your captive	Peach Blossom
My bane! my antidote!	White Poppy
My compliments	Iris
You occupy my thoughts	Purple Violet, Pansy
You please all	A Bunch of Currants
You are always lovely	Double Indian Pink
You are all that is lovely	Austrian Rose
You are intoxicated with pleasure	Peruvian Heliotrope
You have no claims	Pasque Flower
Your qualities surpass your loveliness	Mignonette

DANCING.

The dances most popular in America are quadrilles, of four, eight, or sixteen; and round dances, as waltzes, polkas, mazourkas, varsovianas, galopades, schottisches, and country dances—of which last there are many varieties, including the Highland reel and Roger de Coverley. It is impossible to properly teach the steps of these dances on paper. They must be learned by seeing them performed by a dancing-master, and regularly practised with a partner, before a lady or gentleman becomes perfect enough to take part in a round dance at a party or public ball.

French Terms used in Dancing.

A la fin.—At the finish.

A vos places.—To your places.

Balancez.—Set to partners.

Balancez en moulinet—The gentlemen join right hands with partners, and set in the form of a cross.

Balancez en rond.—All join hands and set in a circle.

Balancez quatre en ligne.—The four dancers set in a line, holding both hands.

Chaine Anglaise.—Right and left.

Chaine Anglaise double.—The right and left double.

Chaine des dames.—Ladies' chain.

Chaine des dames double. — Double ladies' chain, which is performed by all the ladies commencing at the same time.

Chassez à droite et à gauche.—Move to the right and left.

Chassez croisez, tous les huit, et dechassez.—Gentlemen all change places with partners, and back again.

Contre partie pour les autres. — The other dancers do the same.

Demi chaine Anglaise.—Half right and left.

Demi moulinet.—The ladies all advance to the centre, giving right hands, and return to places.

Demi promenade.—Half promenade.

Demi tour à quatre.—Four hands half round.

Dos-à-dos—The two opposite persons pass round each other.

En avant deux, or *en avant et en arrière.*—The first lady and opposite gentleman advance and retire.

En avant quatre et en arrière.—The four opposite persons advance and retire.

En avant trois deux fois.—Advance three twice.

Grande promenade tous les huit. — All the eight dancers promenade.

Le grand rond.—All join hands and set in a circle.

Les dames en moulinet.—Ladies right hands across, half round, and back again with left.

La grande tour de rond.—All join hands and dance quite round to places.

La même pour les cavaliers.—The gentlemen do the same.

Pas d'Allemande.—The gentlemen turn their partners under their arms.

Pas de Basque.—This step is peculiar to Southern France, and bears a strong resemblance to the step of the redowa.

Retraversez.—Return to places.

Retraversez en donnant la main gauch.—The two opposite recross, giving left hands.

Tour à coin.—Turn the corners.

Tour des mains.—Turn partners.

Traversez.—The two opposite persons exchange places.

Traversez deux en donnant la main droite—The two opposite exchange places, giving right hands.

Quadrilles.—*The First Set.*

Figure 1. LE PANTALON.—Right and left; set and turn partners; ladies' chain; half promenade, and half right and left.

Figure 2. L'ETE.—Leading lady and opposite gentleman advance and retire; chassez right and left; cross over to each other's places; chassez right and left; re-cross, and turn partners.—*Double L'Ete.* Both couples advance and retire, and cross over; advance and retire again; cross, chassez to right and left, balancez and turn partners.

Figure 3. LA POULE.—First lady and opposite gentleman cross over, giving right hands, back with the left; balancez four in a line, and half promenade; two advance and retire twice; four advance and retire; half right and left.

Figure 4. LA TRENISE.—First couple advance twice, leaving the lady at left of opposite gentleman, and first gentleman retires; two ladies cross over and change sides, while first gentleman passes between them up the centre; the same repeated to places; set and turn partners.

Or, Figure 4. LA PASTORALE. — This is

usually substituted for Trenise, but the two are never danced in the same quadrille. The first couple advance twice, leaving the lady opposite; the three advance and retire twice; first gentleman advances twice, and set; hands four half round, and half right and left.

Figure 5. La Finale.—All change sides and back; leading lady and opposite gentleman advance and retire; chassez right and left; cross over; chassez right and left; re-cross and turn partners; ladies' chain; all set in a cross, gentleman outside; all turn partners to places; finish with grand promenade.—*Or*, all promenade or galop; advance to centre, and retire; half promenade; advance four, retire, and return to places; ladies' chain, and grand promenade.

Each of the figures is repeated by each set of partners. Trenise and Pastorale are substituted one for the other at the pleasure of the dancers, but both are not danced, the First Set consisting of five and not six figures. The best known quadrille is Payne's First Set, but the music of every quadrille is arranged in precise time, so that no confusion arises; the music, indeed, greatly assisting the dancers.

The Lancers.

Figure 1. La Rose.—First lady and opposite gentleman advance and retire; advance a second time and turn in the centre; top couple lead between the opposite couple, returning outside; set to corners, and turn.

Figure 2. La Lodoiska.—First couple advance and retire; advance a second time, leave the lady in the centre and retire; set and turn partners; advance and retire in two lines, and turn partners to places.

Figure 3. La Dorset.—First lady advances and stops opposite gentleman; salute and retire to places, turning to the right, four ladies' hands across; turn opposite gentleman; re-cross with right hands and turn partners.

Figure 4. L'Etoile.—First couple advance to the couple on the right and salute; **turn** round to the couple on the left and same; **then** chassez croisez, leading couple returning to places, right and left with opposite couples.

Figure 5. Les Lanciers.—Grand chain, first couple promenade in the centre and face off the figure, the side couples falling in behind; all chassez across and dechassez; all cast off, ladies to the right, gentlemen to the left; meet partners and lead up the centre; fall back in two lines, advance and retire in two lines; turn partners to places.

Grand promenade at the end.

The Caledonians.

Figure 1. The two leading couples hands across and back; set to partners and turn; ladies' chain; half promenade half right and left. The other two couples repeat this.

Figure 2. First gentleman advances and retires twice; all set at corners and turn, each lady passing into the next lady's place; having changed partners all promenade round. The second, third, and fourth gentlemen repeat this figure; then all will have regained their places.

Figure 3. First lady and opposite gentleman advance and retire twice, turning in centre, top couple leading between the opposite couple, returning outside; set at corners and turn; all advance and retire twice, in a circle, with hands joined; repeated by the other couples in succession.

Figure 4. First lady and opposite gentleman advance and stop; their partners immediately do the same; both couples turn partners to places; ladies to the right, each into the other's place; gentlemen to the left, each into the other's place; repeat; promenade to places and turn partners; other couples repeat the figure in succession.

Figure 5. Leading couple promenade round inside the figure; the four ladies advance and retire; the four gentlemen do likewise; all set to partners and turn; grand chain, half round; all promenade to places, and turn partners; all chassez croisez; repeated by the other couples in succession.

Promenade for finale.

Parisian Quadrille.—Danced as in First Set by any number of ladies and gentlemen, arranged, couple by couple, in two lines.

Double Quadrille.—Danced by four couples, double sides and ends.

Figure 1. Le Pantalon.—Top and bottom couples right and left, while the side couples dance chaine Anglaise outside them. All four balancez to partners. The four ladies hands across, and back to places. Half promenade, top and bottom couples chaine Anglaise, whilst side couples grande chaine round them.

Figure 2. L'Ete.—Top lady, and lady on her right, with their opposite partners, perform L'Ete (each forming a semicircle to the left in crossing over to opposite places). The side couples repeat the figure.

Figure 3. La Poule.—The top lady, and lady on her right, with opposite gentlemen, set in two cross lines. Side couples do likewise.

Figure 4. La Pastorale.—Top and bottom couples dance La Pastorale with the two couples on their right. The latter do likewise with top and bottom couples.

Figure 5. La Finale.—All galopade round. The top and bottom couples galopade forwards; and, whilst they are retiring, the side couples advance, and as they retire, top and bottom couples galopade to opposite places. Side couples do the same. Top and bottom couples re-advance; and, while they retire, the side couples re-advance, and as they retire, top and bottom galopade back to places. Side couples do likewise. Double ladies' chain, and galopade round. Side couples repeat the figure, which finishes with a galop all round.

Spanish Dance.—All stand in two lines, as for a country dance, except that—

The first gentleman is on the ladies' side, and the first lady on the gentlemen's side. First gentleman and second lady dance to each other, and change places, while first lady and second gentleman do same; first gentleman and lady dance to each other, and change places, while second gentleman and lady do same; first gentleman and second lady dance to each other, and change places, while first

lady and second gentleman do same; first gentleman and second lady dance to each other, and change places; all four then join hands in the centre, and change places, in the same order as before, four times; all four pousette, leaving the second lady and gentleman at the top, as in a country dance; the first couple repeat the same figure with every succeeding couple to the end of the dance. When there are many couples in this dance, it can be commenced in several places by reversing the position of the lady and gentleman at (say) every fourth couple.

The Polka. — The step of the polka is simple enough when once learned.

It consists merely of three steps and one rest. The gentleman commences with a slight spring on his right foot, at the same time sliding the left food forward. This is the first movement (the toe of the left foot being pointed outward, and the heel pointed towards the right foot). The right foot is then brought up to the left with a slight spring, the left foot being at the same time raised. This is the second movement. Then fall on the left foot, raising the right foot behind, which is the third movement. After a rest of one quaver, spring with the left foot, and slide the right forward, thus reversing the movement. The polka is danced in couples all round, across, and up and down the ball-room, the gentleman holding his partner by the hand and waist, and the lady resting her left hand on her partner's shoulder.

The Schottische is a popular round dance.

The couples stand as in the polka. The gentleman commences with his left foot, and slides it forward; brings up the right foot to the place of the left foot, again sliding the left forward; springs or hops on the left or forward foot; repeats this movement to the right, beginning with the right foot, sliding it forward, bringing up the left foot to the place of the right, and sliding the right forward again, then hopping on the right. The lady makes her corresponding steps in time to the music. The movement then changes into a series of double hops and a double rotation. Spring twice on the left foot, turning half round; twice on the right foot, turning half round; twice again on the left foot, turning half round; and then twice again on the right foot, turning half round. Then begin as before, and so proceed in a series of circles right round the room.

The Waltz.—All the waltz steps — valse a deux temps, redowa, valse a trois temps, &c.—must be learned of a master; or, better still, of a partner who will patiently waltz with you till you are sufficiently *au fait* to waltz with a stranger. The things to be avoided are hurry, anxiety, and awkwardness.

Waltz Cotillon.—Take places as for a quadrille.

First couple waltz inside; first and second ladies advance and cross, and cross with a waltz step; first and second gentlemen the same; third and fourth couples follow; and first and second couples waltz to places, as also do the third and fourth. The side couples separate and join hands with top and bottom couples, forming four in a line; all advance and retire twice; then all cross and turn; re-advance and retire twice, and re-cross over to places. The four couples then waltz round to places. Grand chain; gentlemen remaining in their places, ladies passing under the arm of each gentleman till they have regained their places. This completes the figure, which is repeated four times, each couple in succession taking the lead.

Circassian Circle is danced in couples round the ball-room, the ladies at the right of the gentlemen; the first and second couples leading off thus :— Right and left dancers set and turn partners; ladies' chain; waltz; and so on right round the circle. The dance may be commenced at several places.

Le Galop.—The galopade is generally danced towards the end of the evening, or as the conclusion to a waltz, by any number of couples. The gentleman commences with his left foot, and the lady with her right; each making eight short sliding steps, and then half turn; again advance and half turn, varied with a valse a deux temp step.

Country Dances are nearly all danced, without any particular step, to quick music. The following is one of the easiest and most popular :—

Merrie England.—

Four lines of sixes—three ladies and three gentlemen; the ladies on the right of the gentlemen; three sets of four, hands across and back again, balancez to partners, and turn to places. Right and left and back again; ladies' chain and back again; all advance and retire, advance a second time, and the leading couples pass through to face the third line; then begin again until first couple arrive at the bottom of the dance.

Polka Country Dance. — Dancers form two lines—ladies on the right, gentlemen on the left. Top lady and second gentleman set a polka step, and cross into each other's places; second lady and top gentleman repeat

same to places. The two couples polka down the middle and back again. Same repeated till bottom couple are at top, and so on at pleasure.

The Triumph. — This good old-fashioned country dance is at once graceful and attractive.

The dancers stand in two rows—ladies on one side, gentlemen on the other. First lady and gentleman dance down the middle and up again; then the lady passes down the dance with the next gentleman, followed by her partner. The two gentlemen now lead the lady up between them, each taking her by one hand, and holding their other hands above her head; pousette all round, and repeat figure till all the ladies have been taken in triumph through the dance.

Highland Reel.—This, more or less, is the general reel of the English, Irish, and Scots; except that the latter adopt the Highland step, which cannot be taught on paper. The dancers, in parties of three or four—a lady, or two ladies back to back, between two gentlemen, in line to form one reel—chassez and form the figure eight, the gentlemen changing places at each turn of the figure eight, and dance to partners; and continue the figure according to the time of the music.

Sir Roger de Coverley.—This, the merriest of the old English country dances, is usually the last dance of the evening.

All the company, young and old, form in two lines; ladies on the left from the top, and gentlemen on the right. Top lady and bottom gentleman advance to centre, give right hand, turn round, and retire; top gentleman and lady do the same. Top lady and bottom gentleman advance and turn with left hand; other couple do the same. Then the same is repeated with both hands, and again with a bow to each other; the other couple always repeating same. Ladies then turn to right and gentlemen to left, promenade to bottom of the room, meet partners, the first couple joining hands and allowing the other couples to pass under; the first couple remaining at the bottom. Repeat *ad libitum*.

XIV. LADIES' WORK.

Patchwork.—This is a nice way of using up scraps of silk, satin, and velvet, which would otherwise be too small to convert to any useful purpose. Pin-cushions, sofa-cushions, and many similar things are done in this way; and when calico and cambric are used, quilts are made. Rich materials look very handsome in mosaic patterns, stars, diamonds, and other fancy shapes, which should be cut from cardboard or tin plates. Old envelopes, or other waste writing-paper, cut from the shapes, may be used in backing up the pieces. The satin or other material is then tacked on the paper, and the various pieces are sewn together. It requires care to arrange the colours well. The study of any mosaic woodwork will greatly aid in this, as far as the effects of light and shade are concerned.

Cloth Patchwork.—For this kind of patchwork a pattern should be chosen of rather large-shaped pieces, each piece bound with galloon of decided colour. Handsome borders for table-covers can be made by this means. The pieces of cloth are to be selected of as many bright and decided hues as can be obtained. Each piece may be about the size of an ordinary playing-card, and have a pattern braided upon it with gold-coloured worsted braid. A lady with taste would make every design different, and, this being done, the outline of each piece should be made correct, and the binding, of the same shade as the braid, put all round. It should be placed on the right side, and neatly sown down with the same coloured silk, and then turned over the edges, and secured on the reverse side; the pieces are then seamed together, with due regard to a symmetrical arrangement.

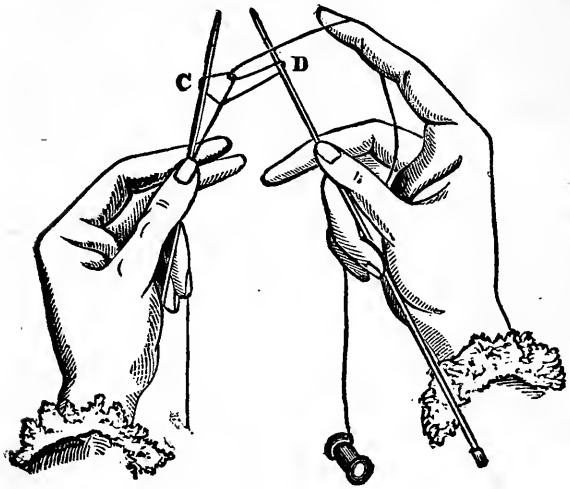
Patchwork Quilts are formed in the same way with pieces of silk, plain and flowered, or with pieces of printed cotton, arranged into regular circles, squares, and diamonds, so as to produce a harmonious design.

Needle-Books are usually made with a pin-cushion on one side—that is, instead of two thin covers merely, one side consists of two pieces of pasteboard, with a margin of ribbon between, and stuffed with flannel. The flannel leaves for needles should be of different sizes, neatly cut in delicate points around the edge, or worked with coloured silk. These books can be round, or square, or oblong. Some make butterfly needle-books; the outside wings of embroidered velvet, the inside of silk, and flannel, for needles, between. The body is stuffed with emery. Needle-books are made in many fancy shapes—a pair of bellows is one of the most popular. Each side forms a pin-cushion, with a piece of kerseymere for needles between them, and a bodkin for the nozzle.

Emery Bags are made in various forms. Some are merely little square bags, stuffed hard with emery; others are made round, and painted like an apple, plum, or peach; others imitate a little barrel, with coloured cord for hoops. But the prettiest are imitations of strawberries, made of crimson merino, worked with green and brown silk to represent the calyx and spots of the strawberry. Unless these bags are made of very firm stuff, th should be lined, for the emery is pt to sift out.

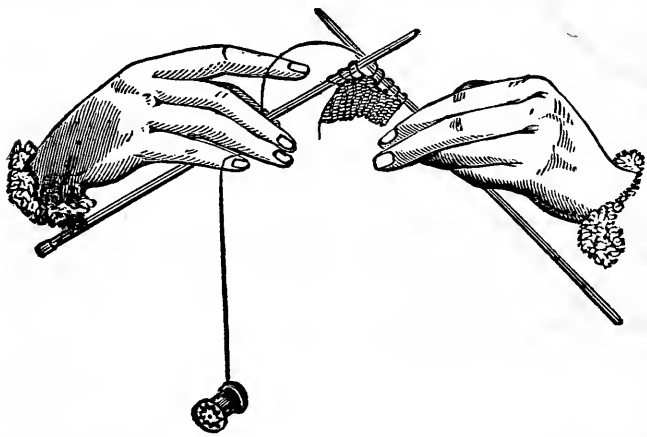
Knitting.—Persons with weak sight, and even those who ar quite blind, can produce delicate nitted articles. Great attention must be paid to the position of the hands and fingers in knitting. The implements re either two, four, or five needles, sometimes called pins. The one on which the stitches are to be transferred is held

in the *right* hand; the work itself, and the other needle, or needles, in the *left*. The work being held in the left hand, the needle in the same hand must be held closely pressed between the palm and the third and fourth fingers, while the foremost stitches are kept near the point by the thumb and the second finger; the first is thus left free to assist in knitting, slipping the stitches forward, shortening the point of the needle, &c. The other needle is held between the thumb and first finger of the right hand, and rests on the palm. If four or five needles be employed, the two absolutely in use must be held as described; the others naturally fall below the left hand. Now look to the following instructions and the diagrams.



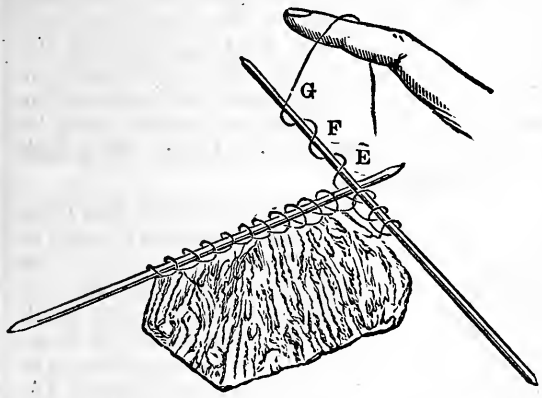
To Cast on with Two Pins.—Make a loop at the end of the thread, and put it on the left-hand pin; take the other pin in the right hand, and slip it into the loop; pass the thread between the two pins, and bring the point of the right-hand pin in front; pass the thread through the loop on the left pin; there will then be a loop on each pin (see diagram). The loop must then be slipped on to the left-hand pin. *Repeat*, by putting the right-hand pin through the loop, and passing the thread between the pins as before.

Plain Knitting.—When you have cast on the stitches, the pin with the stitches on it must be held in the left hand; turn the thread round the little finger of the right hand, and pass it under the second and third fingers, and over the fore-finger; with the right hand put the other pin into the first loop on the left pin; with the fore-finger of the right hand the thread must be passed between the pins, and, by bringing the head through, one stitch is formed; then take the loop of the left pin and repeat.



To Slip a Stitch is to transfer a stitch from the left pin to the right without knitting it. In *all knitting the first stitch of every row* should be slipped to make the edge firm and even. This is not given in the directions to work the patterns, as it would much lengthen the description, but is to be observed as a fixed rule; for example, when a row commences thus, *knit* two *together*, work

as follows :—Slip the first stitch, knit the second, and turn the slipped stitch over the knitted one.

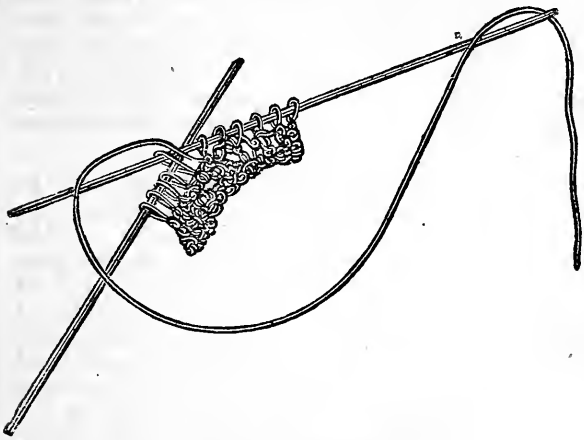


To Make Two, Three, or More Stitches. — Turn the thread as many times round the pin as E F G, and in the next row; pearl a stitch and knit a stitch alternately, taking off one turn of the thread each time, for as many stitches as were made in the row before.

To Make a Stitch.—Bringing the thread forward between the pins. When this stitch is worked in the next row, it will form an open stitch.

To Knit Two Stitches together.—Take two stitches with the right-hand pin, and knit as one stitch.

To Knit Three Stitches together.—Slip one stitch, knit two stitches together, and with the point of the left-hand pin turn the slipped stitch over the two knitted together, leaving but one stitch.

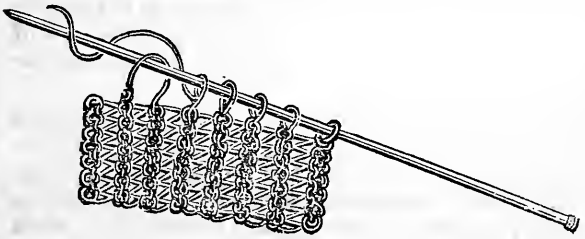


Pearl, also called *Seam*, *Back*, or *Rib-Stitch.*—Begin the row with the thread in *front* of the pin, pass the point of the pin *down* the stitch, turn the thread round the pin, and take it off as in plain knitting; repeat, always keeping the thread in front.

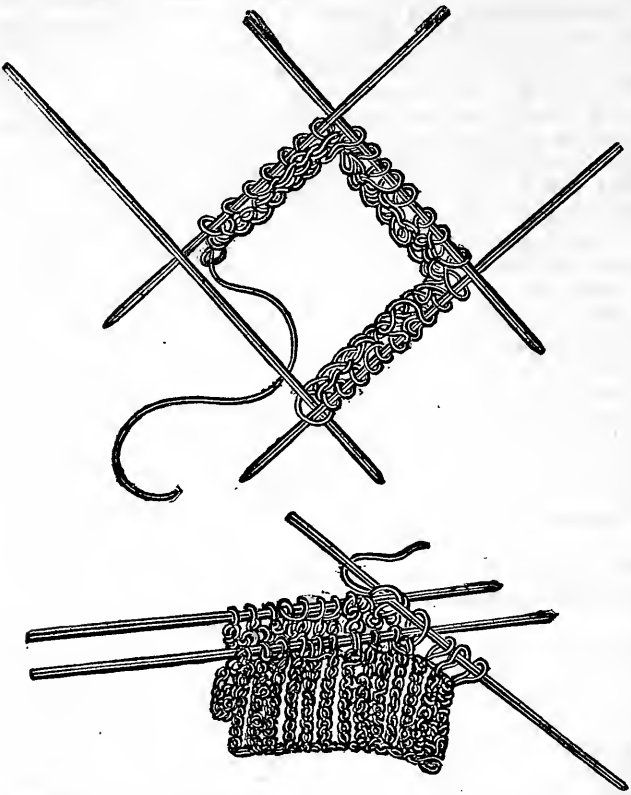
Pearl and Plain Stitches in the Same Row.—Pass the thread to the *back* of the work before knitting plain stitches, and to the *front* before pearling stitches.

To Pearl Two or Three Stitches together.—Keep the thread in *front* of the pin, pass the point of the right pin *down* two or three stitches, and pearl them together.

To Make a Stitch in Pearl Knitting.—Having the thread in *front* of the pin, turn the thread round the pin so as to bring it in front again.



To Raise Stitches. Hold the work on the *right* side. Put the pin in the side of the work. (See diagram.) Pass the thread *round the pin* and bring it throughso as to form a stitch of plain knitting. Repeat it to the end of the row.



To Form a Round.—Four or five pins are required. Cast on the required number of stitches on one of the pins, and divide them equally between the other pins, keeping the fourth or fifth pin to knit with, and with this pin knit the first stitch that was cast off. On knitting off, the three or four pins form one round.

To Join Two Pieces of Knitting together.—Put the two pins containing the work together, the deepest at the back, and with a third pin put it through one stitch of each pin (see diagram), and knit the two together as one stitch.

Decreasing, or Knitting Two Stitches together. Merely knit two stitches as if they were one.

To Cast-off.—Knit two, pass the one first knitted over the other; knit one, pass the preceding one over it, and continue. The number passed over are reckoned as cast off.

Ladies' Knitted Spencer or Jacket.—Materials: Four hanks Scotch scarlet wool, and one black; two bone knitting pins.

Cast on for back 24 stitches; work back and forward; increase to 64 by casting up the wool in front of the pin, before the last stitch of each row; 12 ribs plain, decrease to 26 by taking two together before the last stitch of each row, cast off, lift for shoulder, where you finish casting off, 26 stitches, knit 5 ribs plain, increase to 50 for neck, knit 24 ribs plain,* knit from the front 20 stitches, take two together, then knit to the end of the row, casting up the wool before the last stitch so as to form the front and the back at the same time, plain row, then repeat from *, till 20 intakes have been made in the middle of the work, and 20 stitches have been added at one side; sew this to the back, then begin at the other shoulder, and do this side the same, sew to the back, knit three ribs across the bottom, join on the black wool,* work two ribs and a row of holes by casting up the wool and taking two together, two ribs plain, cast off, lift the stitches all round the front with black wool, and repeat from *; draw a narrow ribbon through the holes, top and bottom. Sleeves may be knitted for this jacket by casting on 74 stitches, knit 3 ribs, then decrease to 50 stitches by taking two together at the end of each row, knit 50 ribs, join on the black wool and knit two plain, two purl, till the black is two inches deep, cast off, sew up the sleeve, and sew into the jacket. A rib means two rows.

Ladies' Knitted Body-Flannel.—Materials: Five hanks white Scotch wool, two bone pins.

Cast on 90 stitches; plain first row, second row three plain, two purl, repeat to end of the row; repeat second row again, which forms a plain and purl stripe alternately; work the length of five-eighths, and at the end of the back row cast on 24 stitches, to form the arm-hole, knit three rows plain, then make a row of holes by casting up the wool to make one stitch, take two together—this last row is purled—knit two plain rows, cast off; this forms the one side, knit the other side in the same way, then sew up the sides till within two inches of the top, which is left for the sleeve; join the row of holes together, and run a blue ribbon through them, knotted in front. For sleeve, cast on 72 stitches, knit two rows plain, decrease to 50 by taking two together at the end of each row, work 14 rows, a row of holes same as round the top, two plain rows, cast off, sew up the sleeve, and put it in the jacket.

Ladies' Knitted Stocking. — Materials: Six hanks Scotch fingering wool, white or scarlet, or, when worked in stripes, any two colours may be used—a French wool, "Bonna Mara," is very suitable; four needles, No. 13, or finer if the French wool is used.

Cast on 32 stitches on each of two needles, and 33 on the third, which will make 97, join together and work round, first row plain, second row two plain, two purl all round; repeat till the work is an inch deep; the plain stitches being always worked over the plain, this forms the top of the stocking; work plain all round, except one stitch purl for the seam; continue to do so till it is eight inches long, then begin the intakes at the third stitch from the seam, slip one, knit one, pass the slipped one over the knitted one, work one plain, purl the seam-stitch, one plain, then take two together; do this every fifth row eight times, then six intakes, having six rows between each—this shapes the stocking; work plain round; except the seam-stitch, $4\frac{1}{2}$ inches long, you have then 69 stitches on the needles; put on one needle 16 stitches on each side of the seam-stitch, then leave the remaining 34 on two needles, this divides the stitches for the heel; the part where the seam-stitch is, forms the heel, and is worked back and forward, one purl and plain row alternately, slipping always the first stitch without working, keeping the seam-stitch purled; work in this manner 34 rows, which form the length of the heel. To close it, purl two stitches past the seam-stitch on the purl side, take two together, purl one, then turn the stocking and begin on the right side, knit till two past the seam-stitch, then take two together, knit one, turn again and purl till three past the seam-stitch; take two together, purl one, turn again and knit till three past the seam-stitch; take two together, knit one, turn again and work as before, always knitting one stitch beyond the last, till there are only three stitches left; each side inworked, then knit two together, and turn without knitting one after, repeat plain and purl side till the stitches are all worked on one needle—this forms a gusset; the seam-stitch need not be continued in the gusset. With the needle on which the gusset is on, lift 17 stitches down the side of the heel, and on one needle knit the 34 stitches that were left for the front, then lift 17 stitches on the other side of the heel, and on that needle knit the half of the gusset, one plain row all round, and down the side of the heel that was first lifted to the last three stitches, knit two together, knit one, knit the front across, and, at the beginning of the next needle, knit one, take two together, work round and repeat these intakes every alternate row 10 times at each side of the heel; work plain round four inches in length, keeping the needles in the same position as when the heel was finished; the front of the stocking being on one needle, there should be the same number of stitches on this needle as on the two back needles; begin the intakes at the same side of the stocking as at the heel, three stitches from the end of the needle on the under side of the foot, take two together, knit one, then on the next needle knit one, take two together, work to the last three stitches,

take two together, knit one, next needle knit one, take two together, repeat these four intakes every alternate row till there are 24 stitches in all, being 12 on the front needle and 12 on the two back; place them together, and knit one front and one back stitch together, slip the one stitch over the last worked one, and so close the toe.

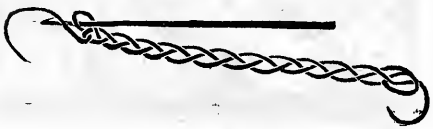
Gentleman's Comforter.—Materials: Six-thread fleecy wool, blue and white, or any two colours; needles, No. 9.

Cast on 68 stitches, knit five plain rows, 6th row knit five stitches, make one, take two together to the end but five, knit them plain. Three rows plain knitting. Repeat from the 6th row, and knit three patterns in each colour until long enough; cast off, and finish with a fringe.

Crochet is, perhaps, the most popular kind of fancy needlework. By attending to the following instructions, any lady may acquire a knowledge of the mode of proceeding.

STITCHES USED IN CROCHET.

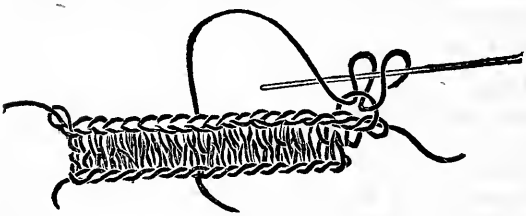
Chain Stitch is the foundation stitch in all crochet. Make a loop on the hook and draw the cotton through it. This forms the first chain stitch. By drawing the cotton through this one, a second stitch is formed; and so continue.

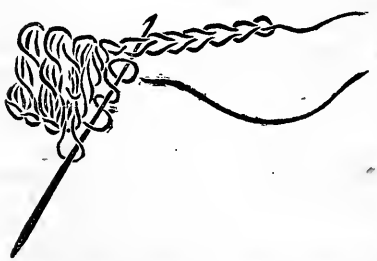


Plain or Single Crochet.—Insert the hook in the foundation loop, and draw the thread through the two loops.

Double Crochet.—Insert the hook in the loop, and draw the cotton through it, which will leave two loops on the hook; draw the cotton through the two loops, which leaves one loop on the hook.

Treble Stitch.—Twist the cotton once over the hook; insert the hook in the loop and draw the cotton through, there will then be three loops on the hook; draw the cotton through two loops, there will then be two loops on the hook; draw the cotton through the two loops, there will then be one loop.





Long Stitch.—Twist the cotton twice over the hook, insert the hook in the loop, and draw the cotton through, there will then be four loops on the hook; draw the thread through two loops, which leaves three loops; again draw the thread through two loops, there will be two loops; once more draw the thread through two loops, there will be one loop. If a longer stitch is required, twist the cotton again over the hook.

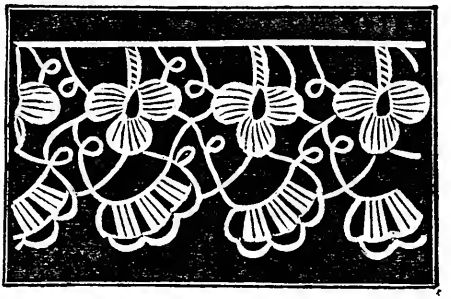
In working the patterns be careful to observe the difference between the words "into" and "under;" the former means "into the loop," while the latter is worked into the space "under the loop." This plan is adopted in all the crochet-books.

Crochet Anti-macassar of Fingering Wool.—Materials: Two hanks scarlet wool, two white, one yellow, one black, and a bone crochet-hook.

Work with the scarlet wool 5 chain stitches, then 3 treble, putting them in the second chain-stitch, then 3 chain and 3 treble, putting them in the same chain-stitch as the other 3. This is the 1st row. Turn the work round, make 3 chain, work 3 treble into the centre chain of last row, then 3 chain and 3 treble into the same centre hole, turn, and repeat till you have 25 points in the stripe. Work 4 stripes of scarlet and 3 of white. Join the yellow wool at the beginning of the 1st stripe, and work round it thus — make 7 chain-stitches, work 1 double-stitch in the 3 chain-stitches which form the point, then repeat till it is worked round. Do so to the other 6 stripes. When this is done, they are joined together with the black wool, scarlet and white stripe alternately. Join the black to the scarlet stripe at the beginning, make 5 chain, work it by a double-stitch into the yellow chain of the white stripe, then 5 chain and a double-stitch into the yellow of the scarlet stripe, repeat till you get to the end of the row, join on the other stripes in the same manner. Finish by making of the wool left 14 tassels, two inches in length, to be fastened to the top and bottom of the anti-macassar.

Crochet Cushion in Wool.—Make a chain the length of the cushion with the darkest shade of red, and work 2 rows of double crochet, each row beginning at the same end. 3rd row.—With 2nd shade. 4th row.—With 3rd shade work 3 stitches. *2 of gold, 7. Repeat from * to the end. 5th row.—With 4th shade, 2 stitches, *1 gold, 2 red, 1 gold, 1 red, 3 gold, 1 red. Repeat from *. 6th row.—1 lightest red, *2 gold, 2 red, 2 gold, 3 red. Repeat from *. 7th row.—The same colour and pattern as the last. 8th row.—The same as 5th. 9th row.—Same as 4th. 10th row.—Same as 3rd. 11th row.—Same as 2nd. 12th row.—1 darkest red and 1 lightest green 1 aternately to he end of the row. 13th row.—With lightest green work 1 long, 1 chain, miss 1, and repeat to the end. In the 14th, 15th, 16th, and 17th rows use the 2nd, 3rd, 2nd, and 1st shade of green, being dark in the centre and light on each side. A narrow ribbon velvet can be run in the centre row of green.

Crochet Edging.—Commence with 12 chain. Work 1 single in 4 double



chain-stitch, 1 chain to cross the stem, 1 single in round loop, 3 treble, 1 single. Repeat these 5 stitches twice more in round loop, 4 single on stem, 9 chain, 1 single in 3rd chain back to form a dot; 3 chain, join to 3rd division of leaf, 9 chain, make a dot, 3 chain, join to 2nd division of leaf, 10 chain, turn back. 2nd row.—1 single in 1st chain stitch. After last dot turn back 3 chain, 2 treble 3 times in loop formed by 10 chain; 3 chain, 1 single in same loop; turn back 4 chain, 1 single in each 3 chain of last row, 9 chain, make a dot, 3 chain, 1 single in 3rd chain-stitch from last dot in 2nd row. 9 chain, make a dot, 3 chain, 1 single in 1st chain-stitch after 1st dot in 2nd row. Repeat from the commencement, making 19 chain instead of 12, and 4 chain joining to the last dot of last row; then 10 chain; before turning back, work 1 single in 3rd chain-stitch after 1st dot in last row, and join 1st division of leaf to the 3 chain before last dot in last row.

Netting.—The first preparation for this kind of work is a piece of fine string or strong thread. Tie it in a knot to go over one foot, and come up to a convenient distance from the eyes; or a shorter string may be fastened to the knee or to a heavy cushion. Hav-

ing filled your needle, fasten the end of the thread in a slip-knot on the stirrup, and you are ready to begin.

Plain Netting. — Pass the thread thus joined to the stirrup over the fore, second, and third fingers of the left hand, the fore-finger being close to the knot, and the mesh held under the thread, and straight along the finger. Pass the thread under these fingers, and catch it up with the thumb. Leave it to hang over the hand in a loop, pass the needle up through the loop over the fingers, *under* the mesh, and under the foundation-thread or the stitch to be worked. Draw the needle through, in doing which you form a loop, which catch over the fourth finger of the left hand. Gradually let the thread off the *three* fingers, and tighten it into a knot, to form itself close to the mesh. Then gradually tighten the loop, still over the fourth finger, *taking care not to let it go until it is drawn nearly tight.* This is the elementary stitch in Netting—the only one—from which every pattern is compounded. If well done, the *stitch* will just be tight enough to allow the mesh to slip from it, and the knot will be quite close to the mesh. It forms a diamond.

Square Netting.—To produce a piece of netting which shall be square, and in which the holes shall be of the same shape, begin on *one* stitch; in this net two. Turn, and do one stitch in the first, and two in the last. Turn again, and work a stitch on every stitch but the last; in this do two. Continue until you have, along one side, as many holes *but one* as you require. For instance, if in your pattern you have thirty-six, you want thirty-five only. Now do a row, stitch for stitch, without any increase. This makes the corner square. After this, net the last two stitches of every row together, until you have but one.

Fancy Stitches. — Round Netting. — This stitch is particularly strong, therefore especially suitable for purses, mittens, &c. From the mode of working it contracts considerably, and will require at least a fifth more stitches than plain netting with the same mesh to make any given length. Begin as for plain netting, but draw the needle completely out from under the mesh, without inserting it in the stitch; then pass it through the loop on which you are to work, turning the needle upwards and towards you. Tighten the stitch, as in common netting.

Honeycomb Netting.—This requires four rows for a perfect pattern, and must have an even number of stitches. 1st row.—Miss the first stitch, and net, instead of it, the second, then the first; now net the fourth, and afterwards the third. Repeat to the end of the row. 2nd row.—Plain netting. 3rd row.—Net the first stitch plain, then miss one; net the next; net the missed stitch; repeat, until you come to the last stitch, which net plain. (This row, it will be observed, is exactly like the first, but with a plain stitch at the beginning and ending of the row, to throw the holes into the proper places.) 4th row.—Plain netting. Repeat these four rows alternately.

Long Twisted Stitch.—Do a row of round netting with a fine mesh; a plain row, with a mesh double the size; and then another row like the first. (Useful for purses.)

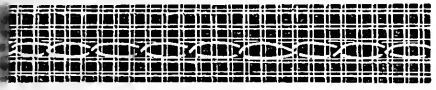
Embroidering on Netting is done either in simple darning, which only permits such geometrical patterns as can be worked by counting threads; or by real embroidering of flowers, leaves, and other designs, in chain-stitch. To do this, have the pattern drawn on light-coloured crape, which tack over the surface of the netting, and put the latter into a small hand-frame. The instrument used for the work is a *tambour-needle*, and it is to be done in the ordinary tambour-stitch. Generally, in this sort of work, the flowers, leaves, stems—in short, every part of the design—are edged with a line of chain-stitch in the finest gold thread. When all the embroidery is done, draw out the thread of crape, as you would those of canvas in working on canvas and cloth.

Netted Neck-tie.—Six shades of blue Berlin wool; mesh small; net eighty stitches; net six rows of each shade,

epeat the shades until of the width equired; cast off, and finish with aisy tassels.

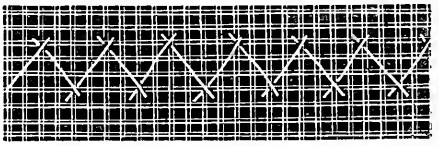
Herring bone Stitches. — hese stitches are used in such a large ariety of work that some explanation f them is necessary. Both the plain nd fancy stitches are much used as rimmings for children's and ladies' resses. The various stitches make heap and pretty additions or headings o embroidery in place of insertion. his work is also suitable for dresses nd jackets made of washing materials. n using coarse silk, twist, or fine cord, llowance must be made for the differnce in the size of the stitches.

Chain Stitch.—Make a knot in the hread, and draw the needle through



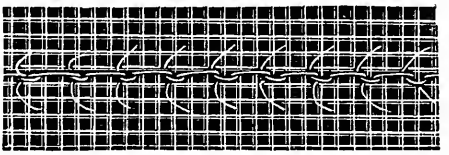
o the right side of the material; inert the needle again in the same place, nd draw it out a little nearer to you; he thread should form a loop under he needle; do not draw it too tightly. Continue the stitch, and it will form a chain resembling crochet or tambour.

Simple Herring-bone Stitch. This may be worked by closely observing



the diagram better than by any explanation we can give. Place the needle straight in the material, keeping the thread always underneath the needle.

Coral Stitch. Place the needle dia-



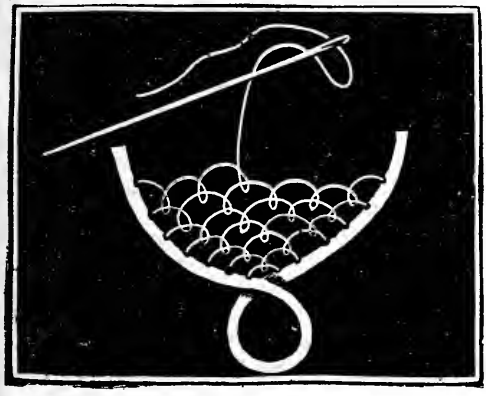
gonally in the work instead of straight, as in the one above.

Double Coral Stitch. This stitch is worked in the same manner as the preceding one; the only difference is that it has two branches instead of one.

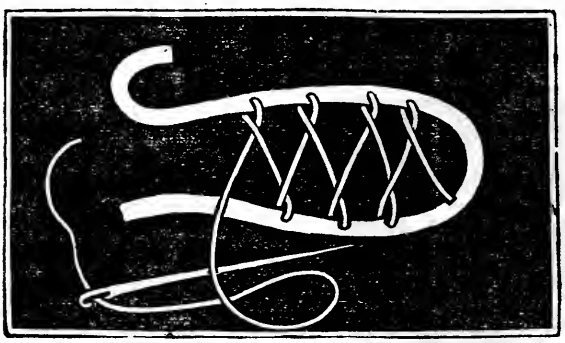
POINT-LACE WORK.

Before commencing to work the patterns, they should be rendered strong by being pasted or gummed on coloured calico. The outline of the design is formed by tacking Hawthorn's braid over the broad lines, the stitches being taken rather close, and across the braid, to prevent it from stretching. When fastening on or off, a small piece of the braid is turned in neatly. When the outline has been formed by the braid, the lace stitches are worked in with Mecklenburg thread, the sizes varying according to the degree of coarseness required. In fastening off the thread, great care should be taken to do it securely. When the whole design is worked, the tackings of the braid should be carefully cut, and the pattern preserved for after use.

Point de Bruxelles. This is the most simple of the stitches used in Point-lace, and is the foundation of all the others. It is produced by making a succession of button-hole stitches, distant from each other about the sixteenth part of an inch, leaving the loops loose, and all the same length. Haythorn's braid has an imitation of the Brussels edging attached, which saves the necessity of working it.



Brussels Lace. This is a repetition of the former stitch, and is carried backwards and forwards until the whole space is filled up.

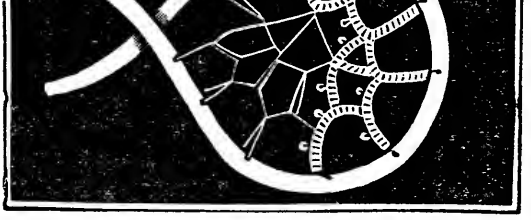


Point d'Alençon.

Point d'Alençon is a useful stitch for the veins of leaves, or for the boundary of a pattern which has a straight line on one or both sides. It forms a pattern like a hem-stitch, being worked with an alternate stitch on one of the two lines which are to be the boundaries, care being taken that the threads come over and under each other at every alternate stitch.

Double Point de Bruxelles.

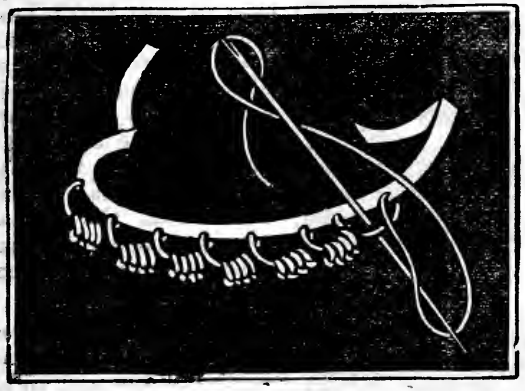
Double Point de Bruxelles.—Commence by drawing the needle and thread through the braid; then make a loop of the thread from right to left, bringing it under the thumb of the left hand; then pass the needle through the braid and through the loop, leaving a short length of the thread to work the next row on; draw the needle through, and a sort of double stitch, secure and tight, is formed. The distance of the stitches must be regulated by the fineness of the work and the size of the thread used. The second row is worked in a similar manner, only the needle is passed through the loops of the first row, and then inserted into the second row of loops, working from right to left.



Guipure Bars, or Raleigh Lace.

Guipure Bars, or Raleigh Lace. This illustration represents one of the most useful varieties of this branch of needlework, because it is applicable to many other kinds of work as well as to the point lace. The bars may be carried from one point to another in any irregular manner, as it is not necessary to preserve uniformity, which would give the work a formal appearance. After all the spaces of the groundwork are filled in with this looping backwards and forwards, every line is worked in solid button-hole stitch with very fine thread, introducing the dot according to taste. The dot, which is generally introduced in the centre of each bar, is formed as follows: After working three or four stitches in the button-hole or Point de Bruxelles stitch, turn the thread round from right to left, put the needle into the last close stitch, bringing it inside the loop; then

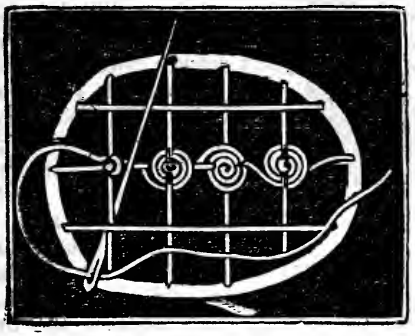
take the thread which forms the left side of the loop, and turn the thread three times round the needle; draw out the needle, and continue to finish the line with the close stitches.



Point de Venise.

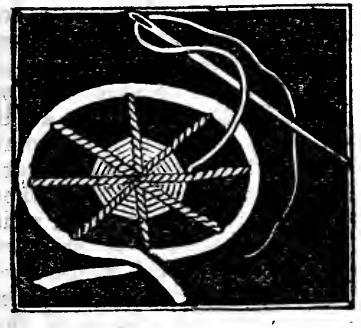
Point de Venise. This stitch is the same as the Point de Bruxelles, except that four button-hole stitches must be worked in each loop instead of one.

Point d'Angleterre. This is a useful stitch, and has a pretty effect. The ground-work is formed by passing the thread across the space to be filled up, and fastening it by a stitch at the opposite side to keep it in its place; then pass the needle on through a space according to the size required for the squares, and carry the thread back to the other side. When a sufficient number of threads are inserted to fill up the space, they must be crossed in the same manner, taking care to carry the thread, as in darning, under and over the first row of lines. A spot is then worked in each point, where the threads cross each other, by passing the needle under and over the four threads, five or six times round, carrying the thread to the next point by twisting it twice round the cross line.



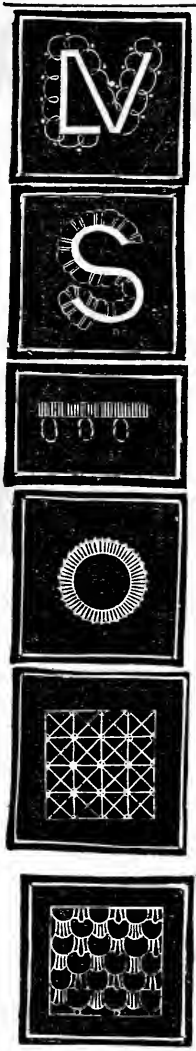
Point d'Angleterre.

Rosette of Point d'Angleterre is similar in character to the preceding stitch, but is used for filling up smaller spaces. Commence by carrying a line across the space, and return by twisting the thread eight or ten times round the first, thus making a double twisted line; pass the needle on to a space which will divide the opening into eight divisions, and carry the thread backwards and forwards in the same manner as the first. When eight of these twisted lines are made, fasten them together with a stitch in the centre; then commence the spot in a similar manner to the previous stitch, but work more rounds—eight or ten will be required, and finish by carrying the thread back to the edge by twisting it twice round the first foundation line.



Rosette of Point d'Angleterre.

Dotted Venetian Bars. Pass the thread across the space two or three times; work four or five button-hole stitches over them, then leave one loose, and upon it work three or four button-hole stitches. Repeat this to the end of the bar.



Little Venetian Edging.—To form this make one stitch, as in Point de Bruxelles, and in the loop thus formed work one tight button-hole stitch before making the next loop.

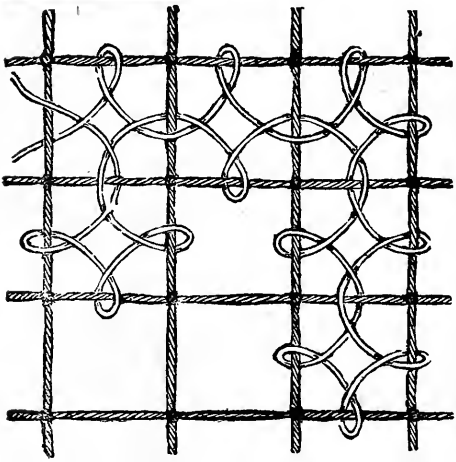
Sorrento Edging.—Commence by working a stitch the same as in the Little Venetian Edging, and then another about half the length, and continue a long and a short stitch alternately; the length of the stitches depending on the space to be filled, but the usual sizes would be about an eighth and a sixteenth of an inch.

Raleigh Bars.—Commence as in the Dotted Venetian Bars, by making a bar of two or three threads, and working on them a few button-hole stitches; then pass the needle over the bar instead of passing it through the loop, and bring it out to the right of the new loop, leaving a loop of thread about an inch and a half long, which hold beneath the left thumb, and pass the needle eight times round the right-hand side of the loop. Now remove the thumb, and draw it up, which will form a knot; slip the needle up between the threads which form the bar, and continue the button-hole stitches and knots to the end.

Spanish Point.—Make an underlay of soft cotton, over which work, very closely together, even and smooth, a succession of button-hole stitches. The edge is sometimes finished with dotted Venetian or Raleigh bars.

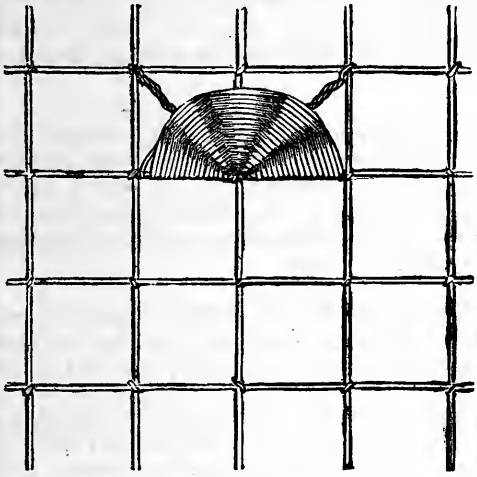
Open English Lace.—Make a number of diagonal bars rather more than an eighth of an inch apart, then add a line of perpendicular and one of horizontal threads, and work a spot where the bars cross each other, as in the English lace. The effect is improved if the horizontal and upright threads are made coarser than the other two.

Barcelona Lace.—The first row is worked the same as the Sorrento edging, but the second row has four tight stitches worked in the wide space; the third is the same as the first, and repeated.

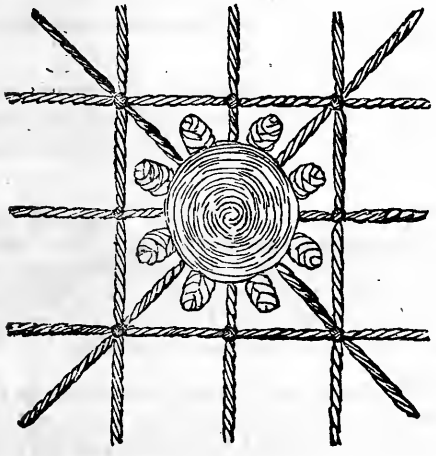


GUIPURE D'ART.

Point d'Esprit. — This effective stitch forms a light and elegant grounding where heavy stitches are introduced into the pattern. As will be seen, it is simply a very loose button-hole stitch, or "Point de Bruxelles," as it is termed in point-lace work. The stitches are taken from centre to centre of the squares of netting; and, when a row is worked the distance required, turn the frame and proceed to work backwards, interlacing the stitches with the other row by passing the needle under the upright bars of netting just above the bottoms of



Point de Reprise.



Wheel.

the loops already worked, which secures them in their places. It is this interlacing which gives the effect to the work.

Point de Reprise.—This stitch is useful for forming stars, flowers, &c., and is darned over and under the netting to form the flower desired; but this illustration is adapted to a fan-like pattern. A twisted thread is taken across two squares and darned over and under.

Wheel.—This is used to fill up one or four holes of the netting. It has picots attached, and an examination of the previous diagrams will indicate the mode of working.

Tatting, or Frivolite.—In this fashionable and easy work there are only two stitches, the English and the French stitch; and these are generally used alternately.

Position of the Hands.—The shuttle being filled with cotton, leave about half a yard at the end. Hold the shuttle between the thumb and the first and second fingers of the right hand, and the thread, an inch or two from the end, between the thumb and first finger of the left. Pass the thread round the fingers of the left hand (holding them rather apart), and bring it up again between the thumb and fore-finger, thus making a circle.

English Stitch. Let the thread between the left hand and the shuttle fall towards you. Slip the shuttle *downwards* under the loop, between the first and second fingers, and draw it out with a slight jerk towards the right, in a horizontal position, when a loop will be formed on it with the thread which was passed round the fingers of the left hand. Hold the shuttle steadily, with the thread stretched out tightly, for, if you slacken it, the loop instantly transfers itself to this thread, and becomes a tight instead of a slip-knot. While holding it thus stretched out, work up the knot with the second finger, till it comes close up to the thumb.

French Stitch.—Instead of letting the thread fall forward, throw it back in a loop over the finger of the left hand, and pass the shuttle up between the thread round the fingers and this loop. Draw it up, and complete it as the other.

Double Stitch.—These two stitches, worked alternately.

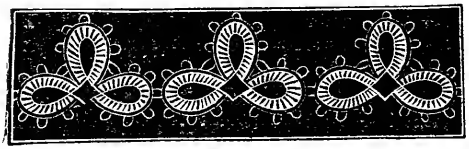
Picot.—This is the little loop, or purling, ornamenting the edge. It is made with a gilt purling-pin. Lay the point of the pin parallel with and close to the edge of the stitches. Pass the thread which goes round the fingers over the pin before making the next stitches. All the picots on one loop of tatting ought to be made without withdrawing the pin.

To Join Loops.—They are always united by the picots, which should be on the first of any two to be joined. In it draw the cotton which goes round the fingers of the left hand, and slip the shuttle through this loop; tighten the cotton again over the fingers, and continue. Sometimes a needle and thread are used in joining patterns. In this case, leave a longer thread to begin with, and then thread the needle on it.

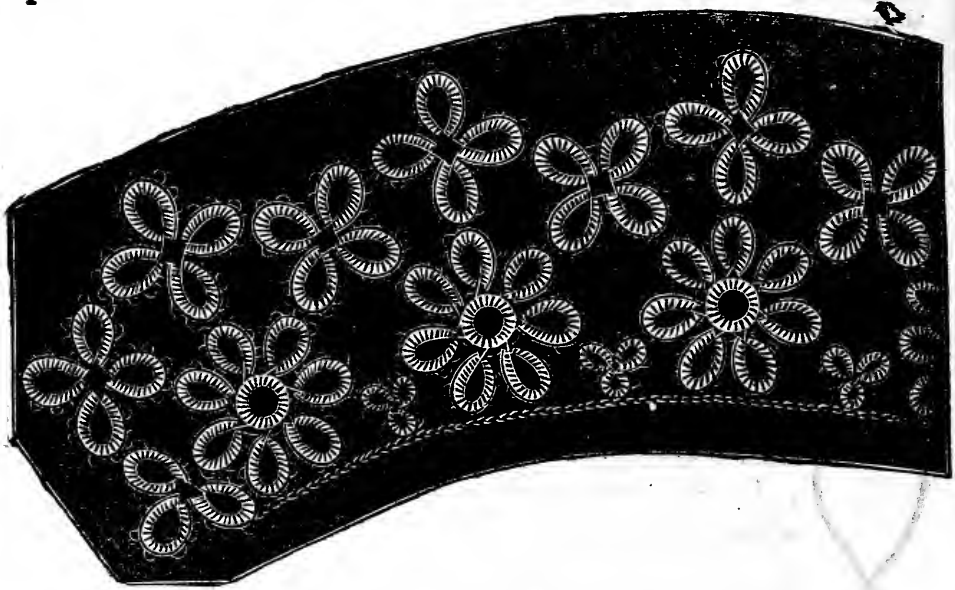
To Wash Tatting.—Cover a bottle with flannel, on which tack the tatting; rub it with a lather of white soap, and boil it; rinse it out, and pull it very carefully out before ironing. A piece of clean linen should be laid over it, between it and the iron. *Another way.*—Put the lace in cold water and soap in an enamelled saucepan, and place it on the fire until it boils, rinse in lukewarm blue water, roll in clean cloth, and, when nearly dry, carefully stretch it out and straighten all loops with a fine pin.

PATTERNS IN TATTING.

Edging.—Materials: Boar's head cotton No. 14, a small shuttle, steel crochet needle.



Make a loop, work 2 double stitches, 1 purl stitch, 7 times, 2 double, draw close. Commence another loop close to the first, work 2 double, 1 purl, 2 double, 1 purl, 2 double; draw the thread through the 4th purl of the first loop; pass the shuttle through; 2 double, 1 purl, 2 double, 1 purl, 2 double, 1 purl, 2 double. Draw close, and commence another loop. Work in the same way as the last, draw close, tie firmly, and break off the thread. Commence another leaf in the same way, joining them at the 5th purl.



STAR COLLAR.

Berlin Wool-work.—The following are the stitches most commonly used in wool-work on canvas:—

Tent Stitch.—Bring the needle from the back, and put it through the hole to the right above it. This stitch is used in putting beads on to wool-work, as in slippers, &c.

Cross Stitch.—A stitch crossing two threads, both in height and width. When a line of it has to be done, all the half stitches should be done, and then all crossed.

Tapestry Stitch.—A single stitch over one thread in width, and two in height.

Raised Berlin Work.—Done over meshes made for the purpose, sharp on one edge, so as to cut the wool when drawn out. Thread the needles with as many colours as you have shades; and do each line in the flower or other design as you go on, beginning at the bottom. Every stitch in this is across one thread in length and two in width. Make a knot at the end of your needleful, and bring the needle up in front of the mesh. Take a *tent-stitch* to the left. Put the wool round the mesh, and take another tent-stitch to the *right*. Put the wool round the mesh, and proceed with the next stitch, taken to the left. Sew a thread of canvas between every two rows. Do not withdraw one mesh until the next row is worked. Raised work requires to be cut by such experienced hands that it is always best to send it to a warehouse to be done; and the Berlin pattern from which it was worked must accompany it, as a guide to the cutter.

Working on canvas with a cloth ground requires them both to be put in a frame, allowing for the cloth stretching considerably more than the canvas. The usual way, when the design is worked, is to draw out the threads, but it is better to cut them off as closely as possible. Any parts in the interior of a group in which the ground is seen should be worked in Berlin wool exactly to match the cloth. The work has thus a raised appearance; if the threads are drawn out, on the contrary, the stitches appear loose.

To Stretch and Prepare Needlework, previous to being mounted.—Nail the piece of work on a board, or stretch it in a needlework-frame; then put paste on the back, and dry either before the fire, or with a very hot iron. When there are beads in the work, care should be taken to prevent them coming in contact with the paste.

WOOL-WORK FLOWERS

Are suitable for ornamenting foot-stools, cushions, antimacassars, work-baskets, mats, tea-coseys, &c.

Fig. 1.

Primrose.—Materials: Two shades of yellow, and two of green single Berlin wool; some fine wire, and a wool needle.

The Pistil.—Take a small piece of wire and form a loop on one end, as shown in Fig. 1. Cover the wire with dark yellow wool.

The Petals. Bend a piece of wire to the shape and size of Fig. 2. Take a piece of light yellow wool, twelve inches in length, join it to the top of this frame, taking it down the centre and up again; pass it three or four times round the top of the wire, and commence darning alternately over and under the wire and the wool that passes down the centre (as shown in Fig. 4), till the space is entirely filled (see Fig. 6.) The petals of which five are required for each blossom, must be arranged round the pistil, and fastened with green wool.

Fig. 2.

The Bud is made in the same way as the pistil, but somewhat larger, and the lightest shade of maize wool must be used instead of the dark.

The Clusters are formed of five blossoms, one bud, and two leaves. The stem of each should be covered with green wool, using the darker shade to join them together.

The Leaf. Bend a piece of wire the size and shape of engraving (Fig. 3.), and darn in same manner as the petal.

Fig. 5 shows the upper and Fig. 7 the under part of the primrose complete.

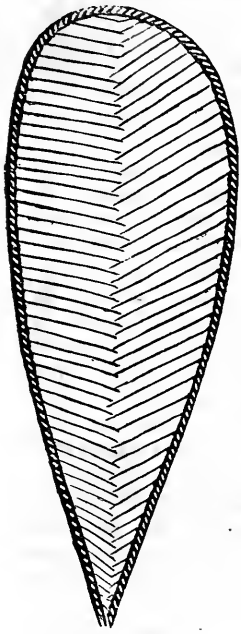


Fig. 3.

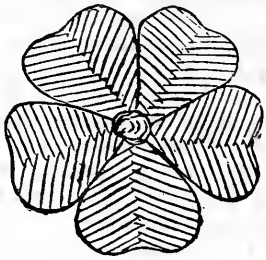


Fig. 5.

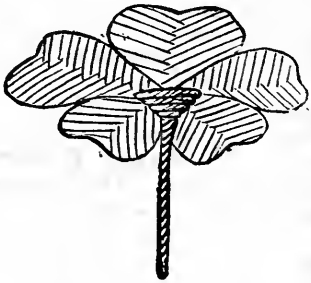


Fig. 7.

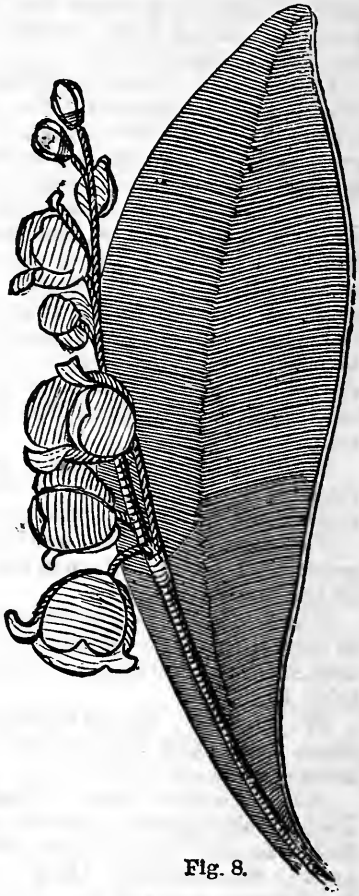


Fig. 8.

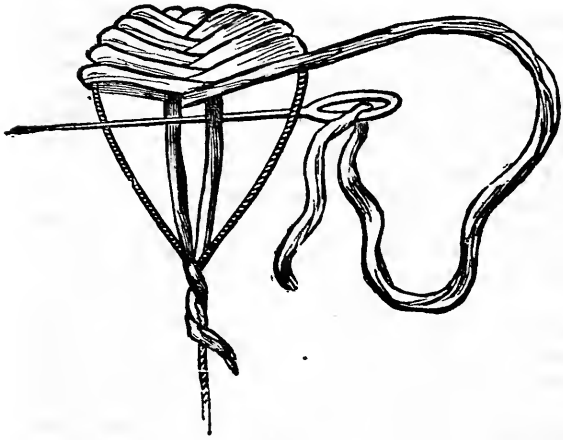


Fig. 4.

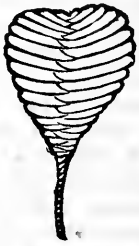


Fig. 6.

Fig. 9.

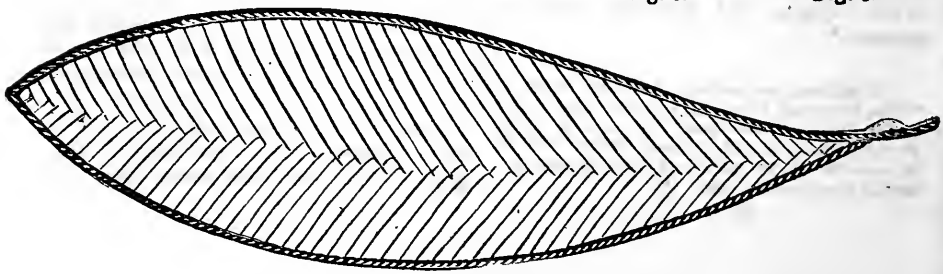


Fig. 10.

Geranium. Materials: The geranium is made in the same way as the primrose, except that the petals are not indented at the top.

Lily of the Valley. Materials: White single Berlin wool for the petals, a deep yellow for the pistils, a deep gas-green for the leaves; some fine and medium size wire, and a wool needle.

The Petals are four in number; the wire must be very fine, and bent to the exact shape of Fig. 9, care being taken to have it nicely pointed. The mode of working is the same as in the primrose, white wool being used. When the petals are worked, the tops should be indented, and bent slightly backwards, to give them the natural form.

The Pistil is simply a loop of yellow, round which the four petals must be placed, and fastened to the stems.

The Stem is of wire, covered with green wool, which is done in fastening on the flowers.

The Leaf is worked in the same way as that of the primrose, the wire being bent the size and shape of engraving (Fig. 10).

The Clusters. Mount eight flowers, three buds, and two leaves in the manner shown in Fig. 8.

Mat with above Flowers. Materials: Two circular pieces of cardboard ten inches across; three-eighths black alpaca; three-eighths black velvet; three dozen skeins of gas-green single Berlin wool, in shades, for the moss; for the flowers, four skeins; five of primrose, two of gas-green, seven of white, four of scarlet.

The flowers consist of two sprays of geraniums, two sprays of primroses, and two sprays of lilies-of-the-valley. The velvet must be stretched over one piece of cardboard, then tack the flowers and moss round the edge, cover the second round of cardboard with alpaca, and sew the two together.*

* Complete instructions will be found in "The Practical Point-Lace Book" and "The Royal Wool-Flower Book," published by J. Bedford and Co., 186, Regent Street, and 46, Goodge Street, W., of whom patterns and materials may also be had.

Lace-Paper Cuttings. For Fire-paper and Stove Ornaments, lace-paper cuttings serve much better than the ordinary paper or willow shavings. The tissue-paper should be in folds three or four inches wide. Mark the outside of the fold over in little diamonds with pencil and ruler; then sketch with a pencil any pattern you fancy; perhaps a bunch of grapes at the bottom, and a wreath of roses and leaves running up through the centre. *Between* the figures cut out all the diamonds, but be careful not to cut them *in* the figures. Three or four leaves, arranged in a circle, and cut in some pretty pattern, form tasteful ornaments for candlesticks. The beauty of cut-paper flowers and lace-paper cuttings depends very much upon the taste and ingenuity of the designer.

Paper Flowers may be easily made. They serve admirably to ornament a ball-room, to add to evergreens for Christmas decorations, &c. *Roses* are simple in construction; a few sheets of pink, yellow, and crimson paper, a little green moss, iron wire, and green cotton being all the materials necessary. Fold the paper into strips of an inch and a half to two inches wide. Then fold back each strip, and slightly scollop one edge; then with your scissors, which should have *round* ends, press out the edge so as to round and slightly crimp it. Cut a piece of wire, and begin to wind the paper round the end. Wind strip after strip loosely, so as gradually to form a flower; then tie it round the stem. White roses, pink, and crimson, with *blush* roses, having a little pale pink in the centre, may be made so; a calyx of moss should be added to some. Make buds half-blown, and full-blown flowers. *Hyacinths* are also pretty and easily made. Cut the paper in inch-wide strips, and notch the edges. Curl the strips with the blunt edge of a knife or scissors, and roll round each strip, with the curled edge outward. Roll each piece up to form a flower, and then secure the whole on a wire, placing them gradually down it, and winding a little green wool round the stem. Add long

thin green leaves of stouter paper. *Dahlias* require more careful cutting, and a paper pattern. The real flower should be carefully imitated.

Feather Ornaments. — Fire-screens, composed of the wings of pheasants or other birds, are both pretty and useful, and, when hung at the fire-side, below the bell-pull, form a nice addition to the decorations of a drawing-room. The wings must be cut off when the bird is fresh killed, and as near the body as possible, being careful not to ruffle the feathers. When the wing is cut off, place the inner edges together, and sew them up till near the top feathers. When sewed, lay the screen on a table right side down, and, having placed a double paper over the sewing, press it with a hot iron. When that side is done, turn the screen, and place a weight on the right side to give it a flat back; it is then fit to attach to the handle —a gilt one looks best. Form rosettes of scarlet chenille, and sew one on each side, so as to cover where the handle joins. A pair of scarlet chenille tassels and silk cord are required; the screen is hung by the loop of cord.

Potichomanie.—This is an excellent imitation of every sort of porcelain—Sèvres, Etruscan, Japanese, Assyrian, &c.

The materials required for potichomanie are:—Glass vases, sheets of paper printed in various designs, varnish, dissolved gum-arabic, prepared colours, paint-brushes, essence of lavender, or turpentine, and fine scissors.

The vases are of plain glass, in various forms; but, from the nature of the work, it is necessary to have the neck large enough to admit the hand. The graceful shape of the Etruscan vase is, therefore, not quite convenient to display potichimanie.

The sheets of paper are coloured, and printed in various designs—some with figures and other subjects in the graceful Etruscan style; others have dragons, trees, flowers, birds, &c., in Chinese design, or figures and decorations in the Assyrian style; and, again, there are medallions, and other subjects exclusively French, besides borders of all these different sorts.

Cut out the figures, birds, &c., carefully and minutely, throwing away the ground part of the paper. Beginners should select such subjects as are tolerably compact. Running patterns, with the various parts connected only by long stems, and flowers with the pistil and stamens projecting, are considerably more *difficult* to arrange than simpler patterns.

Lay all the materials on the table, including a clean towel, some soft old linen, and a small bason of warm water.

Fold a sheet of blotting-paper into several thicknesses, lay one of the subjects on it, and, with one of the brushes, cover the painted side of it entirely with gum. Of course, the vases have been previously thoroughly washed and well dried. Put the paper inside the glass, rubbing down every part with your nail, so that no *air* may be left between the paper and the glass. Proceed in this way with each figure, flower, or other design, until sufficient patterns are placed on the glass; borders may be added or not, according to fancy, but they must always harmonize with the rest of the design.

When all these are perfectly dry, examine them to see that no air-bubble is left. Then add a coating of gum at the back of the figures, and, when dry, a coat of varnish; in both cases *without touching the glass.* After this is thoroughly dry, remove with a wet cloth any spots of gum or varnish that may have fallen on the vase, and mix the colouring matter with sufficient essence of lavender to make it run freely. Pour the liquid into the vase, and twist it round and round until every part is completely coloured. Pour the remainder out, let the vase dry, and then add another coat of varnish.

A vase so prepared may hold water, but we do not recommend the trial. An inner vessel, filled with water, might readily be placed in the larger one for flowers. When the ground of the upper and lower parts is intended

to be black, and that of the centre light, the colour must be applied with brushes, and not poured in as directed. Each part should also be dry before the next band is applied. Great taste is required in the choice of the ground colour, as on it greatly depends the truthful hue of the china.

Vitro-manie, *or Imitation Stained Glass.* — One of the prettiest ornamentations for windows is *decorative glass-work.* The materials are inexpensive and at hand. The best prints for the purpose are the coloured frontispieces of music, or coloured groups of flowers. Heads alone look well; but, whatever be the design, it must be coloured. Take one of these frontispieces, damp it through with a sponge and water, let it remain on a clean and smooth cloth till equally damp; then get a frame of a slate, the full size of the picture, or nearly so; rub some paste on the flat edge of the frame, letting it lie well on the surface; take up the print, place it on the frame; press the paper well down on it, let it remain some hours till dry; it will then, when tapped with the fingers, sound like a drum. Then procure some crystal, or white hard varnish, or Canada balsam, and varnish the picture on both sides. When dry, varnish it again, and perhaps a third time, as the oftener it is varnished the more transparent it will be, but it must be perfectly dry between each varnishing. The picture parts of music frontispieces are generally inclosed with an oval or square; take it out of the frame, and cut it in either of these lines, if there are any, as the case may be. It is now ready for putting on the window; but first get a square of figured net, such as is sold for ladies' sleeves. Have the net the exact size of the pane of glass; get some thin white paint, mixed principally with turpentine, or buy a tube of flake-white—this is already a thick white paint; with the point of a knife mix it with a *very little* turpentine, and a sufficient portion of varnish to render it thin. Paint over somewhat thickly a sheet of paper. Lay the oval, or the square design which has been varnished, on to the net, and cut away the portion of the centre of the net where the design will come. Now lay the net from which the centre has been cut on to the paper, so that it shall absorb the paint on one side of the net; let it stay a few minutes, then take it up and lay it on the glass, taking care that it touches the glass in every part. Let it remain on the glass for a quarter of an hour, then strip it off; a perfect impression of the net will be left on the glass. When this is *quite dry,* varnish the back of the picture again; varnish also the *clear portion of the glass,* which answers to the shape of the picture; then place the two varnished surfaces together, pressing the print well on the glass, that it may not slip. The window-pane will now be complete, and will last for years.

Painting on Silk or Satin.— Make an outline, then lay on with care a wash of isinglass, which will remove the glare and sleekiness of the silk, and make the colours work freely; melt the isinglass in clear water so as not to be glutinous, otherwise it would spoil the colours and discolour the silk; make the lights by a small tint mixed with flake white, of the colour of the intended flower, just sufficient to give a degree from the colour of the silk; for instance, if a blue flower, a very small quantity of bice or blue verditure mixed with white, using less of the white in proportion as the shades grow darker, indigo may be used alone in the darkest. Take care never to lay the colours on thick, as they will crack, to prevent which mix a little white sugar-candy with the gum-water.

XV. COUNSEL AND INFORMATION FOR NURSES AND MOTHERS.

The Nursing of the Sick.

All women are likely, at some period of their lives, to be called on to perform the duties of a sick-nurse, and should prepare themselves as much as possible, by observation and reading, for the occasion when they may be required to perform the office. The main requirements are good-temper, compassion for suffering, sympathy with sufferers, which most women worthy of the name possess, neat-handedness, quiet manners, love of order, and cleanliness. With these qualifications there will be very little to be wished for; the desire to relieve suffering will inspire a thousand little attentions, and surmount the disgusts which some of the offices attending the sick-room are apt to create. Where serious illness visits a household, and protracted nursing is likely to become necessary, a professional nurse will probably be engaged who has been trained to her duties; but in some families, and those not a few let us hope, the ladies of the family would oppose such an arrangement as a failure of duty on their part. There is, besides, even when a professional nurse is ultimately called in, a period of doubt and hesitation, while disease has not yet developed itself, when the patient must be attended to; and, in these cases, some of the female servants of the establishment must give their attendance in the sick-room. There are, also, slight attacks of cold, influenza, and accidents in a thousand forms, to which all are subject, where domestic nursing becomes a necessity; where disease, though unattended with danger, is nevertheless accompanied by the nervous irritation incident to illness, and when all the attention of the domestic nurse becomes necessary.

In the first stage of sickness, while doubt and a little perplexity hang over the household as to the nature of the sickness, there are some things about which no doubts exist: the patient's room must be kept in a perfectly pure state, and arrangements made for proper attendance; for the first canon of nursing, according to Florence Nightingale, its apostle, is to "keep the air the patient breathes as pure as the external air, without chilling him." This can be done without any preparation which might alarm the patient; with proper windows, open fireplaces, and a supply of fuel, the room may be as fresh as it is outside, and kept at a temperature suitable for the patient's state.

Windows, however, must be opened from above, and not from below, and draughts avoided; cool air admitted beneath the patient's head chills the lower strata and the floor. The careful nurse will keep the door shut when the window is open; she will also take care that the patient is not placed between the door and the open window, nor between the open fireplace and the window. If confined to bed, she will see that the bed is placed in a thoroughly ventilated part of the room, but out of the current of air which is produced by the momentary opening of doors, as well as out of the line of draught between the window and the open chimney, and that the temperature of the room is kept about 64°. Where it is necessary to admit air by the door, the window should be closed; but there are few circumstances in which good air can be obtained through the chamber door; through it, on the contrary, the gases generated in the lower parts of the house are likely to be drawn into the invalid chamber.

These precautions taken, and plain nourishing diet, such as the patient desires, furnished, probably little more

can be done, unless more serious symptoms present themselves; in which case medical advice will be sought.

Under no circumstances is ventilation of the sick-room so essential as in cases of febrile diseases, usually considered infectious; such as typhus and puerperal fevers, influenza, hooping-cough, small and chicken-pox, scarlet fever, measles, and erysipelas: all these are considered communicable through the air; but there is little danger of infection being thus communicated, provided the room is kept thoroughly ventilated. On the contrary, if this essential be neglected, the power of infection is greatly increased and concentrated, in the confined and impure air; it settles upon the clothes of the attendants and visitors, especially where they are of wool, and is frequently communicated to other families in this manner. The comfort of feverish patients, and indeed of most sick persons, is greatly increased by being sponged with tepid water, in which camphorated spirit is dropped. A teaspoonful should be poured into a quart of water, and a patient may be sponged every two hours, in warm weather.

Under all circumstances, therefore, the sick-room should be kept as fresh and sweet as the open air, while the temperature is kept up by artificial heat, taking care that the fire burns clear, and gives out no smoke into the room; that the room is perfectly clean, wiped over with a damp cloth every day, if boarded; and swept, after sprinkling with damp tea-leaves, or other aromatic leaves, if carpeted; that all utensils are emptied and cleaned as soon as used, and not once in four-and-twenty hours, as is sometimes done. "A slop-pail," Miss Nightingale says, "should never enter a sick-room; everything should be carried direct to the water-closet, emptied there, and brought up clean; in the best hospitals the slop-pail is unknown." I do not approve," says Miss Nightingale, "of making housemaids of nurses, – that would be waste of means; but I have seen surgical sisters, women whose hands were worth to them two or three guineas a week, down on their knees, scouring a room or hut, because they thought it was not fit for their patients; these women had the true nurse-spirit."

Bad smells are sometimes met by sprinkling a little liquid chloride of lime on the floor; fumigation by burning pastiles is also a common expedient for the purification of the sick-room. They are useful, but only in the sense hinted at by the medical lecturer, who commenced his lecture thus:—"Fumigations, gentlemen, are of essential importance; they make so abominable a smell, that they compel you to open the windows and admit fresh air." In this sense they are useful, but ineffectual unless the cause be removed, and fresh air admitted.

The sick-room should be quiet; no talking, no gossiping, and, above all, no whispering, — this is absolute cruelty to the patient; he thinks his complaint the subject, and strains his ear painfully to catch the sound. No rustling of dresses, nor creaking shoes either; where the carpets are taken up, the nurse should wear list shoes, or some other noiseless material, and her dress should be of soft material that does not rustle. Miss Nightingale denounces crinoline, and quotes Lord Melbourne on the subject of women in the sick-room, who said, "I would rather have men about me, when ill, than women; it requires very strong health to put up with women." Ungrateful man! but absolute quiet is necessary in the sick-room.

Never let the patient be waked out of his first sleep by noise, never roused by anything like a surprise. Always sit in the apartment, so that the patient has you in view, and that it is not necessary for him to turn in speaking to you. Never keep a patient standing; never speak to one while moving. Never lean on the sick-bed. Above all, be calm and decisive with the patient, and prevent all noises overhead.

A careful nurse, when a patient leaves his bed, will open the window wide, and throw the clothes back so as thoroughly to air the bed. She will

avoid drying or airing anything damp in the sick-room.

"It is another fallacy," says Florence Nightingale, "to suppose that night air is injurious; a great authority told me that, in London, the air is never so good as after ten o'clock, when smoke has diminished; but then it must be air from without, not within, and not air vitiated by gaseous airs. A great fallacy prevails also," she says, in another section, "about flowers poisoning the air of the sick-room: no one ever saw them overcrowding the sick-room; but, if they did, they actually absorb carbonic acid, and give off oxygen." Cut flowers also decompose water, and produce oxygen gas. Lilies, and some other very odorous plants, may perhaps give out smells unsuited to a close room, while the atmosphere of the sick-room should always be fresh and natural."

"Patients," says Miss Nightingale, "are sometimes starved in the midst of plenty, from want of attention to the ways which alone make it possible for them to take food. A spoonful of beef-tea, or arrowroot and wine, or some other light nourishing diet, should be given every hour, for the patient's stomach will reject large supplies. In very weak patients there is often a nervous difficulty in swallowing, which is much increased if food is not ready and presented at the moment when it is wanted: the nurse should be able to discriminate, and know when this moment is approaching."

Diet suitable for patients will depend, in some degree, on their natural likes and dislikes, which the nurse will do well to acquaint herself with. Beef-tea is useful and relishing. Eggs are not equivalent to the same weight of meat. Arrowroot is less nourishing than flour. Butter is the lightest and most digestible kind of fat. Cream, in some diseases, cannot be replaced. Observation is the nurse's best guide, and the patient's appetite the rule. Half a pint of milk is equal to a quarter of a pound of meat.

The Monthly Nurse.

The choice of a monthly nurse is of the utmost importance; and in the case of a young mother with her first child, it would be well for her to seek advice and counsel from her more experienced relatives in this matter. In the first place, the engaging a monthly nurse in good time is of the utmost importance, as, if she be competent and clever, her services will be sought months beforehand; a good nurse having seldom much of her time disengaged. There are some qualifications which it is evident the nurse should possess: she should be scrupulously clean and tidy in her person; honest, sober, and noiseless in her movements; should possess a natural love for children, and have a strong nerve in case of emergencies. Snuff-taking and spirit-drinking must not be included in her habits; but these are happily much less frequent than they were in former days.

Receiving, as she often will, instructions from the doctor, she should bear these in mind, and carefully carry them out. In those instances where she does not feel herself sufficiently informed, she should ask advice from the medical man, and not take upon herself to administer medicines, &c., without his knowledge.

A monthly nurse should be between thirty and fifty years of age, sufficiently old to have a little experience, and yet not too old or infirm to be able to perform various duties requiring strength and bodily vigour. She should be able to wake the moment she is called,—at any hour of the night, that the mother or child may have their wants immediately attended to. Good temper, united to a kind and gentle disposition, is indispensable; and, although the nurse will frequently have much to endure from the whims and caprices of the invalid, she should make allowances for these, and command her temper, at the same time exerting her authority when it is necessary.

What the nurse has to do in the way of cleaning and dusting her lady's room, depends entirely on the establishment that is kept. Where there are plenty of servants, the nurse, of

course, has nothing whatever to do but attend on her patient, and ring the bell for anything she may require. Where the number of domestics is limited, she should not mind keeping her room in order; that is to say, sweeping and dusting it every morning. If fires be necessary, the housemaid should always clean the grate, and do all that is wanted in that way, as this, being rather dirty work, would soil the nurse's dress, and unfit her to approach the bed, or take the infant, without soiling its clothes. In small establishments, too, the nurse should herself fetch things she may require, and not ring every time she wants anything; and she must, of course, not leave her invalid unless she sees everything is comfortable, and then only for a few minutes. When down stairs, and in the company of the domestics, the nurse should not repeat what she may have heard in her lady's room, as much mischief may be done by a gossiping nurse. As in most houses the monthly nurse is usually sent for a few days before her services may be required, she should see that all is in readiness; that there be no bustle and hurry at the time the confinement takes place. She should keep two pairs of sheets thoroughly aired, as well as night-dresses, flannels, &c., &c. All the things which will be required to dress the baby the first time should be laid in the basket in readiness, in the order in which they are to be put on; as well as scissors, thread, a few pieces of soft linen rag, and two or three flannel squares. If a berceaunette is to be used immediately, the nurse should ascertain that the mattresses, pillow, &c., are all well aired; and if not already done before she arrives, she should assist in covering and trimming it, ready for the little occupant. A monthly nurse should be handy at her needle, as, if she is in the house some time before the baby is born, she will require some work of this sort to occupy her time. She should also understand the making up of little caps, although we can scarcely say this is one of the nurse's duties. As most children wear no caps, except out of doors, her powers in this way will not be much taxed.

A nurse should endeavour to make her room as cheerful as possible, and always keep it clean and tidy. She should empty the chamber utensils as soon as used, and on no account put things under the bed. Soiled baby's napkins should be rolled up and put into a pan, when they should be washed out every morning, and hung out to dry: they are then in a fit state to send to the laundress; and should on no account be left dirty, but done every morning in this way. The bedroom should be kept rather dark, particularly for the first week or ten days; of a regular temperature, and as free as possible from draughts, at the same time well ventilated and free from unpleasant smells.

The infant, during the month, must not be exposed to strong light, or much air; and, in carrying it about the passages, stairs, &c., the nurse should always have its head-flannel on, to protect the eyes and ears from the currents of air. As young mothers with their first baby are very often much troubled at first with their breasts, the nurse should understand the art of emptying them by suction, or some other contrivance. If the breasts are kept well drawn, there will be but little danger of inflammation; and as the infant at first cannot take all that is necessary, something must be done to keep the inflammation down. This is one of the greatest difficulties a nurse has to contend with, and we can only advise her to be very persevering, to rub the breasts well, and to let the infant suck as soon and as often as possible, until they get in proper order.

The Wet-Nurse.

We are aware that, according to the opinion of some ladies, there is no domestic theme, during a certain period of their married lives, more fraught with vexation and disquietude than that ever-fruitful source of annoyance, "The Wet-Nurse;" but, also, we believe there are thousands of excellent wives and mothers who pass

through life without even a temporary embroglio in the kitchen, or suffering a state of moral hectic the whole time of a nurse's empire in the nursery or bedroom. Our own observation goes to prove, that although many unqualified persons palm themselves off on ladies as fully competent for the duties they so rashly and dishonestly undertake to perform, and thus expose themselves to ill-will and merited censure, there are still very many fully equal to the legitimate exercise of what they undertake; and if they do not in every case give entire satisfaction, some of the fault,—and sometimes a great deal of it,—may be honestly placed to the account of the ladies themselves, who, in many instances, are so impressed with the propriety of their own method of performing everything, as to insist upon the adoption of *their* system in preference to that of the nurse, whose plan is probably based on a comprehensive forethought, and rendered perfect in all its details by an ample experience.

In all our remarks on this subject, we should remember with gentleness the circumstances from which our nurses are drawn; and that those who make their duty a study, and are termed professional nurses, have much to endure from the caprice and egotism of their employers; while others are driven to the occupation from the laudable motive of feeding their own children, and who, in fulfilling that object, are too often both selfish and sensual, performing without further interest than is consistent with their own advantage the routine of customary duties.

Properly speaking, there are two nurses,—the nurse for the mother and the nurse for the child, or, the monthly and the wet-nurse. Of the former we have already spoken, and will now proceed to describe the duties of the latter, and add some suggestions as to her age, physical health, and moral conduct, subjects of the utmost importance as far as the charge entrusted to her is concerned, and therefore demanding some special remarks.

When from illness, suppression of the milk, accident, or some natural process, the mother is deprived of the pleasure of rearing her infant, it becomes necessary at once to look around for a fitting substitute, so that the child may not suffer, by any needless delay, a physical loss by the deprivation of its natural food. The first consideration should be as regards age, state of health, and temper.

The age, if possible, should not be less than twenty nor exceed thirty years, with the health sound in every respect, and the body free from all eruptive disease or local blemish. The best evidence of a sound state of health will be found in the woman's clear open countenance, the ruddy hue of the skin, the full, round, and elastic state of the breasts, and especially in the erectile, firm condition of the nipple, which, in all unhealthy states of the body, is pendulous, flabby, and relaxed; in which case, the milk is sure to be imperfect in its organization, and, consequently, deficient in its nutrient qualities. Appetite is another indication of health in the suckling nurse or mother; for it is impossible a woman can feed her child without having a corresponding appetite; and though inordinate craving for food is neither desirable nor necessary, a natural vigour should be experienced at meal-times, and the food taken should be anticipated and enjoyed.

Besides her health, the moral state of the nurse is to be taken into account, or that mental discipline or principle of conduct which would deter the nurse from at any time gratifying her own pleasures and appetites at the cost or suffering of her infant charge.

The conscientiousness and good faith that would prevent a nurse so acting are, unfortunately, very rare; and many nurses, rather than forego the enjoyment of a favourite dish, though morally certain of the effect

it will have on the child, will on the first opportunity feed with avidity on fried meats, cabbage, cucumbers, pickles, or other crude and injurious aliments, in defiance of all orders given, or confidence reposed in their word, good sense, and humanity. And when the infant is afterwards racked with pain, and a night of disquiet alarms the mother, the doctor is sent for, and the nurse covering her dereliction by a falsehood, the consequence of her gluttony is treated as a disease, and the poor infant is dosed for some days with medicines that can do it but little if any good, and, in all probability, materially retard its physical development. The selfish nurse, in her ignorance, believes, too, that as long as she experiences no admonitory symptoms herself, the child cannot suffer; and is satisfied that, whatever is the cause of its screams and plunges, neither she, nor what she had eaten, had anything to do with it; with this flattering assurance at her heart, she watches her opportunity, and has another luxurious feast off the proscribed dainties, till the increasing disturbance in the child's health, or treachery from the kitchen, opens the eyes of mother and doctor to the nurse's unprincipled conduct. In all such cases the infant should be spared the infliction of medicine, and, as a wholesome corrective to herself, and relief to her charge, a good sound dose administered to the nurse.

Respecting the diet of the wet-nurse, the first point of importance is to fix early and definite hours for every meal; and the mother should see that no cause is ever allowed to interfere with their punctuality. The food itself should be light, easy of digestion, and simple. Boiled or roast meat, with bread and potatoes, with occasionally a piece of sago, rice, or tapioca pudding, should constitute the dinner, the only meal that requires special comment; broths, green vegetables, and all acid or salt foods must be avoided. Fresh fish, once or twice a week, may be taken; but it is hardly sufficiently nutritious to be often used as a meal. If the dinner is taken early—at one o'clock—there will be no occasion for luncheon, which too often, to the injury of the child, is made the cover for a first dinner.

Animal food once in twenty-four hours is quite sufficient. All spirits, unless in extreme cases, should be avoided; and wine is still more seldom needed. With a due quantity of plain digestible food, with early hours, and regularity, the nurse will not only be strong and healthy herself, but fully capable of rearing a child in health and strength. There are two points all mothers, who are obliged to employ wet-nurses, should remember and be on their guard against. The first is, never to allow a nurse to give medicine to the infant on her own authority; many have such an infatuated idea of the *healing excellence* of castor-oil, that they would administer a dose of this disgusting grease twice a week, and think they had done a meritorious service to the child. The next point is, to watch carefully, lest, to insure a night's sleep for herself, she does not dose the infant with Godfrey's cordial, or some soothing syrup or narcotic potion, to insure tranquillity to the one and give the opportunity of sleep to the other. The fact that scores of nurses keep secret bottles of these deadly syrups, for the purpose of stilling their charges, is notorious; and that many use them to a fearful extent is sufficiently patent to all.

It therefore behoves the mother, while obliged to trust to a nurse, to use her best discretion to guard her child from the unprincipled treatment of the person she must, to a certain extent, depend upon and trust; and to remember, in all cases, rather than resort to castor-oil or sedatives, to consult a medical man for her infant in preference to following the counsel of her nurse.

XVI. THE REARING AND CARE OF CHILDREN.

Physiology of Life, as illustrated by Respiration, Circulation, and Digestion.

The infantine management of children, like the mother's love for her offspring, seems to be born with the child, and to be a direct intelligence of Nature. It may thus, at first sight, appear as inconsistent and presumptuous to tell a woman how to rear her infant as to instruct her in the manner of loving it. Yet, though Nature is unquestionably the best nurse, Art makes so admirable a foster-mother, that no sensible woman, in her novitiate of parent, would refuse the admonitions of art, or the teachings of experience, to consummate her duties of nurse. It is true that, in a civilized state of society, few young wives reach the epoch that makes them mothers without some insight, traditional or practical, into the management of infants: consequently, the cases wherein a woman is left to her own unaided intelligence, or what, in such a case, may be called instinct, and obliged to trust to the promptings of Nature alone for the well-being of her child, are very rare indeed. Again, every woman is not gifted with the same physical ability for the harassing duties of a mother; and though Nature, as a general rule, has endowed all female creation with the attributes necessary to that most beautiful and, at the same time, holiest function—the healthy rearing of their offspring—the cases are sufficiently numerous to establish the exception, where the mother is either physically or socially incapacitated from undertaking these most pleasing duties herself, and where, consequently, she is compelled to trust to adventitious aid for those natural benefits which are at once the mother's pride and delight to render to her child.

In these cases, when obliged to call in the services of hired assistance, she must trust the dearest obligation of her life to one who, from her social sphere, has probably notions of rearing children diametrically opposed to the preconceived ideas of the mother, and at enmity with all her sentiments of right and prejudices of position.

It has justly been said—we think by Hood—that the children of the poor are not brought up, but *dragged up*. However facetious this remark may seem, there is much truth in it; and that children, reared in the reeking dens of squalor and poverty, live at all, is an apparent anomaly in the course of things, that, at first sight, would seem to set the laws of sanitary provision at defiance, and make it appear a perfect waste of time to insist on pure air and exercise as indispensable necessaries of life, and especially so as regards infantine existence.

We see elaborate care bestowed on a family of children, everything studied that can tend to their personal comfort—pure air, pure water, regular ablution, a dietary prescribed by art, and every precaution adopted that medical judgment and maternal love can dictate, for the well-being of the parent's hope; and find, in despite of all this care and vigilance, disease and death invading the guarded treasure. We turn to the fetor and darkness that, in some obscure court, attend the robust brood who, coated in dirt, and with mud and refuse for playthings, live and thrive, and grow into manhood, and, in contrast to the pale face and flabby flesh of the pampered child, exhibit strength, vigour, and well-developed frames, and our belief in the potency of the life-giving elements of air, light, and cleanliness receives a shock that, at first sight, would appear fatal to the implied bene-

fits of these, in reality, all-sufficient attributes of health and life.

But as we must enter more largely on this subject hereafter, we shall leave its consideration for the present, and return to what we were about to say respecting trusting to others' aid in the rearing of children. Here it is that the young and probably inexperienced mother may find our remarks not only an assistance but a comfort to her, in as far as, knowing the simplest and best system to adopt, she may be able to instruct another, and see that her directions are fully carried out.

The human body, materially considered, is a beautiful piece of mechanism, consisting of many parts, each one being the centre of a system, and performing its own vital function irrespectively of the others, and yet dependent for its vitality upon the harmony and health of the whole. It is, in fact, to a certain extent, like a watch, which, when once wound up and set in motion, will continue its function of recording true time only so long as every wheel, spring, and lever performs its allotted duty, and at its allotted time; or till the limit that man's ingenuity has placed to its existence as a moving automaton has been reached, or, in other words, till it has run down.

What the key is to the mechanical watch, air is to the physical man. Once admit air into the mouth and nostrils, and the lungs expand, the heart beats, the blood rushes to the remotest part of the body, the mouth secretes saliva, to soften and macerate the food; the liver forms its bile, to separate the nutriment from the digested aliment; the kidneys perform their office; the eye elaborates its tears, to facilitate motion and impart that glistening to the orb on which depends so much of its beauty; and a dewy moisture exudes from the skin, protecting the body from the extremes of heat and cold, and sharpening the perception of touch and feeling. At the same instant, and in every part, the arteries, like innumerable bees, are everywhere laying down layers of muscle, bones, teeth, and, in fact, like the coral zoophyte, building up a continent of life and matter; while the veins, equally busy, are carrying away the *débris* and refuse collected from where the zoophyte arteries are building—this refuse, in its turn, being conveyed to the liver, there to be converted into bile.

All these—and they are but a few of the vital actions constantly taking place—are the instant result of one gasp of life-giving air. No subject can be fraught with greater interest than watching the first spark of life, as it courses with electric speed "through all the gates and alleys" of the soft, insensate body of the infant. The effect of air on the new-born child is as remarkable in its results as it is wonderful in its consequence; but to understand this more intelligibly, it must first be remembered that life consists of the performance of *three* vital functions — RESPIRATION, CIRCULATION, and DIGESTION. The lungs digest the air, taking from it its most nutritious element, the *oxygen*, to give to the impoverished blood that circulates through them. The stomach digests the food, and separates the nutriment —*chyle*—from the aliment, which it gives to the blood for the development of the frame; and the blood, which is understood by the term circulation, digests in its passage through the lungs the nutriment—*chyle*—to give it quantity and quality, and the *oxygen* from the air to give it vitality. Hence it will be seen, that, speaking generally, the three vital functions resolve themselves into one—DIGESTION; and that the lungs are the primary and the most important of the vital organs; and respiration, the first, in fact, as we all know it is the last indeed, of all the functions performed by the living body.

The Lungs—Respiration.

The first effect of air on the infant is a slight tremor about the lips and angles of the mouth, increasing to twitchings, and finally to a convulsive contraction of the lips and cheeks, the consequence of sudden cold to the nerves of the face. This spasmodic

action produces a gasp, causing the air to rush through the mouth and nostrils, and enter the windpipe and upper portion of the flat and contracted lungs, which, like a sponge partly immersed in water, immediately expand. This is succeeded by a few faint sobs or pants, by which larger volumes of air are drawn into the chest, till, after a few seconds, and when a greater bulk of the lungs has become inflated, the breastbone and ribs rise, the chest expands, and, with a sudden start, the infant gives utterance to a succession of loud, sharp cries, which have the effect of filling every cell of the entire organ with air and life. To the anxious mother, the first voice of her child is, doubtless, the sweetest music she ever heard; and the more loudly it peals, the greater should be her joy, as it is an indication of health and strength, and not only shows the perfect expansion of the lungs, but that the process of life has set in with vigour. Having welcomed in its own existence, like the morning bird, with a shrill note of gladness, the infant ceases its cry, and, after a few short sobs, usually subsides into sleep or quietude.

At the same instant that the air rushes into the lungs, the valve, or door between the two sides of the heart—and through which the blood had previously passed—is closed and hermetically sealed, and the blood taking a new course, bounds into the lungs, now expanded with air, and which we have likened to a wetted sponge, to which they bear a not unapt affinity, air being substituted for water. It here receives the *oxygen* from the atmosphere, and the *chyle*, or white blood, from the digested food, and becomes, in an instant, arterial blood, a vital principle, from which every solid and fluid of the body is constructed. Besides the lungs, Nature has provided another respiratory organ, a sort of supplemental lung, that, as well as being a covering to the body, *in*spires air and *ex*pires moisture; this is the cuticle, or skin; and so intimate is the connection between the skin and lungs, that whatever injures the first, is certain to affect the latter.

Hence the difficulty of breathing experienced after scalds or burns on the cuticle, the cough that follows the absorption of cold or damp by the skin, the oppressed and laborious breathing experienced by children in all eruptive diseases, while the rash is coming to the surface, and the hot, dry skin that always attends congestion of the lungs and fever.

The great practical advantage derivable from this fact is the knowledge that whatever relieves the one benefits the other. Hence, too, the great utility of hot baths in all affections of the lungs or diseases of the skin; and the reason why exposure to cold or wet is, in nearly all cases, followed by tightness of the chest, sore throat, difficulty of breathing, and cough. These symptoms are the consequence of a larger quantity of blood than is natural remaining in the lungs, and the cough is a mere effort of Nature to throw off the obstruction caused by the presence of too much blood in the organ of respiration. The hot bath, by causing a larger amount of blood to rush suddenly to the skin, has the effect of relieving the lungs of their excess of blood, and by equalizing the circulation, and promoting perspiration from the cuticle, affords immediate and direct benefit, both to the lungs and the system at large.

The Stomach.—Digestion.

The organs that either directly or indirectly contribute to the process of digestion are, the mouth, teeth, tongue, and gullet, the stomach, small intestines, the pancreas, the salivary glands, and the liver. Next to respiration, digestion is the chief function in the economy of life, as, without the nutritious fluid digested from the aliment, there would be nothing to supply the immense and constantly recurring waste of the system, caused by the activity with which the arteries at all periods, but especially during infancy and youth, are building up the frame and developing the body.

In infancy (the period of which our present subject treats), the series of parts engaged in the process of digestion may be reduced simply to the stomach and liver, or rather its secretion—the bile. The stomach is a thick muscular bag, connected above with the gullet, and, at its lower extremity, with the commencement of the small intestines. The duty or function of the stomach is to secrete from the arteries spread over its inner surface, a sharp acid liquid called the *gastric juice;* this, with a due mixture of saliva, softens, dissolves, and gradually digests the food or contents of the stomach, reducing the whole into a soft pulpy mass, which then passes into the first part of the small intestines, where it comes in contact with the bile from the gall-bladder, which immediately separates the digested food into two parts; one is a white creamy fluid called *chyle*, and the absolute concentration of all nourishment, which is taken up by proper vessels, and, as we have before said, carried directly to the heart, to be made blood of, and vitalized in the lungs, and thus provide for the wear and tear of the system. It must be here observed that the stomach can only digest *solids*, for fluids, being incapable of that process, can only be *absorbed;* and without the result of digestion, animal, or at least human life, could not exist. Now, as Nature has ordained that infantine life shall be supported on liquid aliment, and as without a digestion the body would perish, some provision was necessary to meet this difficulty, and that provision was found in the nature of the liquid itself, or, in other words, THE MILK. The process of making cheese, or fresh curds and whey, is familiar to most persons; but as it is necessary to the elucidation of our subject, we will briefly repeat it. The internal membrane, or the lining coat of a calf's stomach, having been removed from the organ, is hung up, like a bladder, to dry; when required, a piece is cut off, put in a jug, a little warm water poured upon it, and after a few hours it is fit for use; the liquid so made being called *rennet.* A little of this rennet, poured into a basin of warm milk, at once coagulates the greater part, and separates from it a quantity of thin liquor, called *whey.* This is precisely the action that takes place in the infant's stomach after every supply from the breast. The cause is the same in both cases, the acid of the gastric juice in the infant's stomach immediately converting the milk into a soft cheese. It is gastric juice adhering to the calf's stomach, and drawn out by the water, forming rennet, that makes the curds in the basin. The cheesy substance, being a solid, at once undergoes the process of digestion, is separated into *chyle* by the bile, and in a few hours finds its way to the infant's heart, to become blood, and commence the architecture of its little frame. This is the simple process of a baby's digestion:—milk converted into cheese, cheese into *chyle*, chyle into blood, and blood into flesh, bone, and tegument,—how simple is the cause, but how sublime and wonderful are the effects!

We have described the most important of the three functions that take place in the infant's body—respiration and digestion; the third, namely circulation, we hardly think it necessary to enter on, not being called for by the requirements of the nurse and mother; so we shall omit its notice, and proceed from theoretical to more practical considerations. Children of weakly constitutions are just as likely to be born of robust parents, and those who earn their bread by toil, as the offspring of luxury and affluence; and, indeed, it is against the ordinary providence of Nature to suppose the children of the hardworking and necessitous to be hardier and more vigorous than those of parents blessed with ease and competence.

All children come into the world in the same imploring helplessness, with the same general organization and wants, and demanding, either from the newly-awakened mother's love, or

from the memory of motherly feeling in the nurse, or the common appeals of humanity in those who undertake the earliest duties of an infant, the same assistance and protection, and the same fostering care.

The Infant.

We have already described the phenomena produced on the new-born child by the contact of air, which, after a succession of muscular twitchings, becomes endowed with voice, and heralds its advent by a loud but brief succession of cries. But, though this is the general rule, it sometimes happens (from causes it is unnecessary here to explain) that the infant does not cry, or give utterance to any audible sounds, or if it does, they are so faint as scarcely to be distinguished as human accents, plainly indicating that life, as yet, to the new visitor, is neither a boon nor a blessing; the infant being, in fact, in a state of suspended or imperfect vitality,—a state of *quasi* existence, closely approximating the condition of a *still-birth*.

As soon as this state of things is discovered, the child should be turned on its right side, and the whole length of the spine, from the head downwards, rubbed with all the fingers of the right hand, sharply and quickly, without intermission, till the quick action has not only evoked heat, but electricity in the part, and till the loud and sharp cries of the child have thoroughly expanded the lungs, and satisfactorily established its life. The operation will seldom require above a minute to effect, and less frequently demands a repetition. If there is brandy at hand, the fingers before rubbing may be dipped into that, or any other spirit.

There is another condition of what we may call "mute births," where the child only makes short ineffectual gasps, and those at intervals of a minute or two apart, when the lips, eyelids, and fingers become of a deep purple or slate colour, sometimes half the body remaining white, while the other half, which was at first swarthy, deepens to a livid hue. This condition of the infant is owing to the valve between the two sides of the heart remaining open, and allowing the unvitalized venous blood to enter the arteries and get into the circulation.

The object in this case, as in the previous one, is to dilate the lungs as quickly as possible, so that, by the sudden effect of a vigorous inspiration, the valve may be firmly closed, and the impure blood, losing this means of egress, be sent directly to the lungs. The same treatment is therefore necessary as in the previous case, with the addition, if the friction along the spine has failed, of a warm bath at a temperature of about 80 degrees, in which the child is to be plunged up to the neck, first cleansing the mouth and nostrils of the mucus that might interfere with the free passage of air.

While in the bath, the friction along the spine is to be continued, and if the lungs still remain unexpanded, while one person retains the child in an inclined position in the water, another should insert the pipe of a small pair of bellows into one nostril, and while the mouth is closed and the other nostril compressed on the pipe with the hand of the assistant, the lungs are to be slowly inflated by steady puffs of air from the bellows, the hand being removed from the mouth and nose after each inflation, and placed on the pit of the stomach, and by a steady pressure expelling it out again by the mouth. This process is to be continued, steadily inflating and expelling the air from the lungs, till, with a sort of tremulous leap, Nature takes up the process, and the infant begins to gasp, and finally to cry, at first low and faint, but with every engulp of air increasing in length and strength of volume, when it is to be removed from the water, and instantly wrapped (all but the face and mouth) in a flannel. Sometimes, however, all these means will fail in effecting an utterance from the child, which will lie, with livid lips and a flaccid body, every few minutes opening its mouth with a short gasping pant, and then subsiding into a

state of pulseless inaction, lingering probably some hours, till the spasmodic pantings growing further apart, it ceases to exist.

The time that this state of negative vitality will linger in the frame of an infant is remarkable; and even when all the previous operations, though long-continued, have proved ineffectual, the child will often rally from the simplest of means—the application of dry heat. When removed from the bath, place three or four hot bricks or tiles on the hearth, and lay the child, loosely folded in a flannel, on its back along them, taking care that there is but one fold of flannel between the spine and heated bricks or tiles. When neither of these articles can be procured, put a few clear pieces of red cinder in a warming pan, and extend the child in the same manner along the closed lid. As the heat gradually diffuses itself over the spinal marrow, the child that was dying, or seemingly dead, will frequently give a sudden and energetic cry, succeeded in another minute by a long and vigorous peal, making up, in volume and force, for the previous delay, and instantly confirming its existence by every effort in its nature.

With these two exceptions—restored by the means we have pointed out to the functions of life—we will proceed to the consideration of the child HEALTHILY BORN. Here the first thing that meets us on the threshold of inquiry, and what is often between mother and nurse not only a vexed question, but one of vexatious import, is the *crying* of the child; the mother, in her natural anxiety, maintaining that her infant *must be ill* to cause it to cry so much or so often, and the nurse insisting that *all* children cry, and that nothing is the matter with it, and that crying does good, and is, indeed, an especial benefit to infancy. The anxious and unfamiliar mother, though not convinced by these abstract sayings of the truth or wisdom of the explanation, takes both for granted; and, giving the nurse credit for more knowledge and experience on this head than she can have, contentedly resigns herself to the infliction, as a thing necessary to be endured for the good of the baby, but thinking it, at the same time, an extraordinary instance of the imperfectibility of Nature as regards the human infant; for her mind wanders to what she has observed in her childhood with puppies and kittens, who, except when rudely torn from their nurse, seldom give utterance to any complaining.

We, undoubtedly, believe that crying, to a certain extent, is not only conducive to health, but positively necessary to the full development and physical economy of the infant's being. But though holding this opinion, we are far from believing that a child does not very often cry from pain, thirst, want of food, and attention to its personal comfort; but there is as much difference in the tone and expression of a child's cry as in the notes of an adult's voice; and the mother's ear will not be long in discriminating between the sharp peevish whine of irritation and fever, and the louder intermitting cry that characterizes the want of warmth and sleep. All these shades of expression in the child's inarticulate voice every nurse *should* understand, and every mother will soon teach herself to interpret them with an accuracy equal to language.

There is no part of a woman's duty to her child that a young mother should so soon make it her business to study, as the *voice of her infant*, and the language conveyed in its cry. The study is neither hard nor difficult; a close attention to its tone, and the expression of the baby's features, are the two most important points demanding attention. The key to both the mother will find in her own heart, and the knowledge of her success in the comfort and smile of her infant. We have two reasons—both strong ones—for urging on mothers the imperative necessity of early making themselves acquainted with the nature and wants of their child: the first, that when left to the entire re-

sponsibility of the baby, after the departure of the nurse, she may be able to undertake her new duties with more confidence than if left to her own resources and mother's instinct, without a clue to guide her through the mysteries of those calls that vibrate through every nerve of her nature; and, secondly, that she may be able to guard her child from the nefarious practices of unprincipled nurses, who, while calming the mother's mind with false statements as to the character of the baby's cries, rather than lose their rest, or devote that time which would remove the cause of suffering, administer, behind the curtains, those deadly narcotics which, while stupefying Nature into sleep, insure for herself a night of many unbroken hours. Such nurses as have not the hardihood to dose their infant charges, are often full of other schemes to still that constant and reproachful cry. The most frequent means employed for this purpose is giving it something to suck—something easily hid from the mother, or, when that is impossible, under the plea of keeping it warm, the nurse covers it in her lap with a shawl, and under this blind, surreptitiously inserts a finger between the parched lips, which possibly moan for drink; and, under this inhuman cheat and delusion, the infant is pacified, till Nature, balked of its desires, drops into a troubled sleep. These are two of our reasons for impressing upon mothers the *early*, the *immediate* necessity of putting themselves sympathetically in communication with their child, by at once learning its hidden language as a delightful task.

We must strenuously warn all mothers on *no* account to allow the nurse to sleep with the baby, never herself to lie down with it by her side for a night's rest, never to let it sleep in the parent's bed, and on no account keep it longer than absolutely necessary, confined in an atmosphere loaded with the breath of many adults.

The amount of *oxygen* required by an infant is so large, and the quantity consumed by mid-life and age, and the proportion of carbonic acid thrown off from both, so considerable, that an infant breathing the same air cannot possibly carry on its healthy existence while deriving its vitality from so corrupted a medium. This objection, always in force, is still more objectionable at night-time, when doors and windows are closed, and amounts to a condition of poison, when placed between two adults in sleep, and shut in by bed-curtains; and when, in addition to the impurities expired from the lungs, we remember, in quiescence and sleep, how large a portion of mephitic gas is given off from the skin.

Mothers, in the fulness of their affection, believe there is no harbour, sleeping or awake, where their infants can be so secure from all possible or probable danger as in their own arms; yet we should astound our readers if we told them the statistical number of infants who, in despite of their motherly solicitude and love, are annually killed, unwittingly, by such parents themselves, and this from the persistency in the practice we are so strenuously condemning. The mother frequently, on awaking, discovers the baby's face closely impacted between her bosom and her arm, and its body rigid and lifeless; or else so enveloped in the "head-blanket" and superincumbent bed-clothes, as to render breathing a matter of physical impossibility. In such cases the jury in general returns a verdict of "*Accidentally overlaid;*" but one of "Careless suffocation" would be more in accordance with truth and justice. The only possible excuse that can be urged, either by nurse or mother, for this culpable practice, is the plea of imparting warmth to the infant. But this can always be effected by an extra blanket in the child's crib, or an eider-down coverlet, or, if the weather is particularly cold, by a bottle of hot water enveloped in flannel and placed at the child's feet; while all the objections already urged—as derivable from animal heat imparted by actual contact—are entirely obviated. There is another evil at-

tending the sleeping together of the mother and infant, which, as far as regards the latter, we consider quite as formidable, though not so immediate as the others, and is always followed by more or less of mischief to the mother. The evil we now allude to is that most injurious practice of letting the child *suck*, after the mother has *fallen asleep*, a custom that naturally results from the former, and which, as we have already said, is injurious to both mother and child. It is injurious to the infant by allowing it, without control, to imbibe to distension, a fluid sluggishly secreted and deficient in those vital principles which the want of mental energy, and of the sympathetic appeals of the child on the mother, so powerfully produce on the secreted nutriment, while the mother wakes in a state of clammy exhaustion, with giddiness, dimness of sight, nausea, loss of appetite, and a dull aching pain through the back and between the shoulders. In fact, she wakes languid and unrefreshed from her sleep, with febrile symptoms and hectic flushes, caused by her baby vampire, who, while dragging from her her health and strength, has excited in itself a set of symptoms directly opposite, but fraught with the same injurious consequences — "functional derangement."

The Milk.

As Nature has placed in the bosom of the mother the natural food of her offspring, it must be self-evident to every reflecting woman, that it becomes her duty to study, as far as lies in her power, to keep that reservoir of nourishment in as pure and invigorating a condition as possible; for she must remember that the *quantity* is no sure proof of the *quality* of this aliment.

The mother, while suckling, as a general rule, should avoid all sedentary occupations, take regular exercise, keep her mind as lively and pleasingly occupied as possible, especially by music and singing. Her diet should be light and nutritious, with a proper sufficiency of animal food, and of that kind which yields the largest amount of nourishment; and, unless the digestion is naturally strong, vegetables and fruit should form a very small proportion of the general dietary, and such preparations as broths, gruels, arrowroot, &c., still less. Tapioca, or ground-rice pudding, made with several eggs, may be taken freely; but all slops and thin potations, such as that delusion called chicken-broth, should be avoided, as yielding a very small amount of nutriment, and a large proportion of flatulence. All purely stimulants should be avoided as much as possible, especially spirits, unless taken for some special object, and that medicinally; but as a part of the dietary they should be carefully shunned. Lactation is always an exhausting process, and as the child increases in size and strength, the drain upon the mother becomes great and depressing. Then something more even than an abundant diet is required to keep the mind and body up to a standard sufficiently healthy to admit of a constant and nutritious secretion being performed without detriment to the physical integrity of the mother, or injury to the child who imbibes it; and as stimulants are inadmissible, if not positively injurious, the substitute required is to be found in *a tonic*. To the lady accustomed to her Madeira and sherry, this may appear a very vulgar potation for a delicate young mother to take instead of the more subtle and condensed elegance of wine; but as we are writing from experience, and with the avowed object of imparting useful facts and beneficial remedies to our readers, we allow no social distinctions to interfere with our legitimate object.

We have already said that the suckling mother should avoid stimulants, especially spirituous ones; and when something of this sort is absolutely necessary to support her strength during the exhausting process, it should be rather of a *tonic* than of a stimulating character. Every mother should be

provided with a breast-pump, or glass tube, to draw off the superabundance that has been accumulating in her absence from the child, or the first gush excited by undue exertion: the subsequent supply of milk will be secreted under the invigorating influence of a previous healthy stimulus.

As the first milk that is secreted contains a large amount of the saline elements, and is thin and innutritious, it is most admirably adapted for the purpose Nature designed it to fulfil,—that of an aperient; but which, unfortunately, it is seldom permitted, in our artificial mode of living, to perform.

So opposed are we to the objectionable plan of physicking new-born children, that, unless for positive illness, we would much rather advise that medicine should be administered *through* the mother for the first eight or ten weeks of its existence. This practice, which few mothers will object to, is easily effected by the parent, when such a course is necessary for the child, taking either a dose of castor-oil, half an ounce of tasteless salts (the phosphate of soda), one or two teaspoonfuls of magnesia, a dose of lenitive electuary, manna, or any mild and simple aperient, which, almost before it can have taken effect on herself, will exhibit its action on her child.

One of the most common errors that mothers fall into while suckling their children, is that of fancying they are always hungry, and consequently overfeeding them; and with this, the great mistake of applying the child to the breast on every occasion of its crying, without investigating the cause of its complaint, and, under the belief that it wants food, putting the nipple into its crying mouth, until the infant turns in revulsion and petulance from what it should accept with eagerness and joy. At such times, a few teaspoonfuls of water, slightly chilled, will often instantly pacify a crying and restless child, who has turned in loathing from the offered breast; or, after imbibing a few drops, and finding it not what nature craved, throws back its head in disgust, and cries more petulantly than before. In such a case as this, the young mother, grieved at her baby's rejection of the tempting present, and distressed at its cries, and in terror of some injury, over and over ransacks its clothes, believing some insecure pin can alone be the cause of such sharp complaining, an accident that, from her own care in dressing, is seldom or never the case.

These abrupt cries of the child, if they do not proceed from thirst, which a little water will relieve, not unfrequently occur from some unequal pressure, a fold or twist in the "roller," or some constriction round the tender body. If this is suspected, the mother must not be content with merely slackening the strings; the child should be undressed, and the creases and folds of the hot skin, especially those about the thighs and groins, examined, to see that no powder has caked, and, becoming hard, irritated the parts. The violet powder should be dusted freely over all, to cool the skin, and everything put on fresh and smooth. If such precautions have not afforded relief, and, in addition to the crying, the child plunges or draws up its legs, the mother may be assured some cause of irritation exists in the stomach or bowels—either acidity in the latter or distension from overfeeding in the former; but, from whichever cause, the child should be "opened" before the fire, and a heated napkin applied all over the abdomen, the infant being occasionally elevated to a sitting position, and while gently jolted on the knee, the back should be lightly patted with the hand.

Should the mother have any reason to apprehend that the *cause* of inconvenience proceeds from the bladder—a not unfrequent source of pain—the napkin is to be dipped in hot water, squeezed out, and immediately applied over the part, and repeated every eight or ten minutes, for several times in succession, either till the natural relief is afforded, or a cessation of pain allows of its discontinuance. The pain that young infants often suffer, and the crying that results from it, is, as

we have already said, frequently caused by the mother inconsiderately overfeeding her child, and is produced by the pain of distension, and the mechanical pressure of a larger quantity of fluid in the stomach than the gastric juice can convert into cheese and digest.

Some children are stronger in the enduring power of the stomach than others, and get rid of the excess by vomiting, concluding every process of suckling by an emission of milk and curd. Such children are called by nurses "thriving children;" and generally they are so, simply because their digestion is good, and they have the power of expelling with impunity that superabundance of aliment which in others is a source of distension, flatulence, and pain.

The length of time an infant should be suckled must depend much on the health and strength of the child, and the health of the mother, and the quantity and quality of her milk; though, when all circumstances are favourable, it should never be less than *nine*, nor exceed *fifteen* months; but perhaps the true time will be found in the medium between both. But of this we may be sure, that Nature never ordained a child to live on suction after having endowed it with teeth to bite and to grind; and nothing is more out of place and unseemly than to hear a child, with a set of twenty teeth, ask for the "breast."

The practice of protracted wet-nursing is hurtful to the mother, by keeping up an uncalled-for, and, after the proper time, an unhealthy drain on her system, while the child either derives no benefit from what it no longer requires, or it produces a positive injury on its constitution. After the period when Nature has ordained the child shall live by other means, the secretion of milk becomes thin and deteriorated, showing in the flabby flesh and puny features of the child both its loss of nutritious properties and the want of more stimulating aliment.

Though we have said that twelve months is about the medium time a baby should be suckled, we by no means wish to imply that a child should be fed exclusively on milk for its first year; quite the reverse; the infant can hardly be too soon made independent of the mother. Thus, should illness assail her, her milk fail, or any domestic cause abruptly cut off the natural supply, the child having been accustomed to an artificial diet, its life might be safely carried on without seeking for a wet-nurse, and without the slightest danger to its system.

The advantage to the mother of early accustoming the child to artificial food is as considerable to herself as beneficial to her infant; the demand on her physical strength in the first instance will be less severe and exhausting, the child will sleep longer on a less rapidly digestible aliment, and yield to both more quiet nights, and the mother will be more at liberty to go out for business or pleasure, another means of sustenance being at hand till her return. Besides these advantages, by a judicious blending of the two systems of feeding, the infant will acquire greater constitutional strength, so that, if attacked by sickness or disease, it will have a much greater chance of resisting its virulence than if dependent alone on the mother, whose milk, affected by fatigue and the natural anxiety of the parent for her offspring, is at such a time neither good in its properties, nor likely to be beneficial to the patient.

All that we have further to say on suckling is an advice to mothers, that if they wish to keep a sound and unchapped nipple, and possibly avoid what is called a "broken breast," never to put it up with a wet nipple, but always to have a soft handkerchief in readiness, and the moment that delicate part is drawn from the child's mouth, to dry it carefully of the milk and saliva that moisten it; and, further, to make a practice of suckling from each breast alternately.

Dress, Dressing, Washing, &c.

As respects the dress and dressing of a new-born infant, or of a child in arms, during any stage of its nursing, there are few women who will require

us to give them guidance or directions for their instruction; and though a few hints on the subject may not be out of place here, yet most women intuitively "take to a baby," and, with a small amount of experience, are able to perform all the little offices necessary to its comfort and cleanliness with ease and completeness. We shall, therefore, on this delicate subject hold our peace; and only, from afar, *hint* "at what we would," leaving our suggestions to be approved or rejected, according as they chime with the judgment and the apprehension of our motherly readers.

In these days of intelligence, there are few ladies who have not, in all probability, seen the manner in which the Indian squaw, the aborigines of Polynesia, and even the Lapp and Esquimaux, strap down their baby on a board, and by means of a loop suspend it to the bough of a tree, hang it up to the rafters of the hut, or, on travel, dangle it on their backs, outside the domestic implements, which, as the slave of her master, man, the wronged but uncomplaining woman carries, in order that her lord may march in unhampered freedom. Cruel and confining as this system of "back-board" dressing may seem to our modern notions of freedom and exercise, it is positively less irksome, less confining, and infinitely less prejudicial to health, than the mummying of children by our grandmothers a hundred, aye, fifty years ago: for what with chin-stays, back-stays, body-stays, forehead-cloths, rollers, bandages, &c., an infant had as many girths and strings, to keep head, limbs, and body in one exact position, as a ship has halyards.

Much of this—indeed we may say all—has been abolished; but still the child is far from being dressed loosely enough; and we shall never be satisfied till the abominable use of the *pin* is avoided *in toto* in an infant's dressing, and a texture made for all the under-garments of a child of a cool and elastic material.

The manner in which an infant is encircled in a bandage called the "roller," as if it had fractured ribs, compressing those organs—that, living on suction, must be, for the health of the child, to a certain degree distended, to obtain sufficient aliment from the fluid imbibed—is perfectly preposterous. Our humanity, as well as our duty, calls upon us at once to abrogate and discountenance it by every means in our power. Instead of the process of washing and dressing being made, as with the adult, a refreshment and comfort, it is, by the dawdling manner in which it is performed, the multiplicity of things used, and the perpetual change of position of the infant to adjust its complicated clothing, rendered an operation of positive irritation and annoyance. We therefore entreat all mothers to regard this subject in its true light, and study to the utmost simplicity in dress, and dispatch in the process.

Children do not so much cry from the washing as from the irritation caused by the frequent change of position in which they are placed, the number of times they are turned on their face, on their back, and on their side, by the manipulations demanded by the multiplicity of articles to be fitted, tacked, and carefully adjusted on their bodies. What mother ever found her girl of six or seven stand quiet while she was curling her hair? How many times nightly has she not to reprove her for not standing still during the process? It is the same with the unconscious infant, who cannot bear to be moved about, and who has no sooner grown reconciled to one position than it is forced reluctantly into another. It is true, in one instance the child has intelligence to guide it, and in the other not; but the *nerves of motion*, in both instances, resent coercion, and a child cannot be too little handled.

On this account alone, and for the moment setting health and comfort out of the question, we beg mothers to simplify their baby's dress as much as possible; and not only to put on as little as is absolutely necessary, but to make that as simple in its contrivance and adjustment as it will

admit of; to avoid belly-bands, rollers, girths, and everything that can impede or confine the natural expansion of the digestive organs, on the due performance of whose functions the child lives, thrives, and develops its physical being. The following list of baby-linen is the smallest quantity possible consistent with keeping a baby clean and nice:—6 shirts, 2 belts or 4 flannel strips, 4 pilches, 6 night-gowns, 4 long flannels, 6 white petticoats, 4 monthly gowns, 6 robes, 4 head squares, 6 bibs, 4 rollers or swathes, 2 waterproof pilches, 1 hood, 1 cloak, 1 jacket, 2 caps, 6 pair of shoes, 4 dozen napkins.

REARING BY HAND.

Articles necessary, and How to use them.—Preparation of Foods.—Baths.—Advantages of Rearing by Hand.

As we do not for a moment wish to be thought an advocate for an artificial, in preference to the natural, course of rearing children, we beg our readers to understand us perfectly on this head; all we desire to prove is the fact that a child *can* be brought up as well on a spoon dietary as some examples to be found of those reared on the breast; when there is a necessity for substituting artificial for its natural food. It will not be thus less liable to infectious diseases, and more capable of resisting the virulence of any danger that may attack it; but without in any way depreciating the nutriment of its natural food, we wish to impress on the mother's mind that there are many cases of infantine debility which might eventuate in rickets, curvature of the spine, or mesenteric disease, where the addition to, in proper quantities, of an artificial and more stimulating aliment, would not only give tone and strength to the constitution, but at the same time render the employment of mechanical means more beneficial. And, finally, though we would never—where the mother had the strength to suckle her child—supersede the breast, we would insist on making it a rule to accustom the child, as early as possible, to the use of an artificial diet, not only that it may acquire more vigour to help it over the ills of childhood, but that, in the absence of the mother, it might not miss the maternal sustenance; and also for the parent's sake, that, should the milk, from any cause, become vitiated, or suddenly cease, the child can be made over to the bottle and the spoon without the slightest apprehension of hurtful consequences.

To those persons unacquainted with the system, or who may have been erroneously informed on the matter, the rearing of a child by hand may seem surrounded by innumerable difficulties, and a large amount of personal trouble and anxiety to the nurse or mother who undertakes the duty. This, however, is a fallacy in every respect, except as regards the fact of preparing the food; but even this extra amount of work, by adopting the course we shall lay down, may be reduced to a very small sum of inconvenience; and as respects anxiety, the only thing calling for care is the display of judgment in the preparation of the food. The articles required for the purpose of feeding an infant are a night-lamp, with its pan and lid, to keep the food warm; a nursing-bottle, and a prepared teat; and a small pap saucepan, for use by day. Of the lamp we need hardly speak, most mothers being acquainted with its operation: but to those to whom it is unknown we may observe, that the flame from the floating rushlight heats the water in the reservoir above, in which the covered pan that contains the food floats, keeping it at such a heat that, when thinned by milk, it will be of a temperature suitable for immediate use. Though many kinds of nursing-bottles have been lately

invented, and some mounted with India-rubber nipples, the common glass bottle, with the calf's teat, is equal in cleanliness and utility to any; besides, the nipple put in the child's mouth is so white and natural in appearance, that no child taken from the breast will refuse it. The black artificial ones of caoutchouc or gutta-percha are unnatural. The prepared teats can be obtained at any druggist's, and as they are kept in spirits, they will require a little soaking in warm water, and gentle washing, before being tied securely, by means of fine twine, round the neck of the bottle, just sufficient being left projecting for the child to grasp freely in its lips; for if left the full length, or over long, it will be drawn too far into the mouth, and possibly make the infant heave. When once properly adjusted, the nipple need never be removed till replaced by a new one, which will hardly be necessary oftener than once a fortnight, though with care one will last several weeks. The nursing-bottle should be thoroughly washed and cleaned every day, and always rinsed out before and after using it; the warm water being squeezed through the nipple, to wash out any particles of food that might lodge in the aperture, and become sour. The teat can always be kept white and soft by turning the end of the bottle, when not in use, into a narrow jug containing water, taking care to dry it first, and then to warm it by drawing the food through before putting it into the child's mouth.

Food, and its Preparation.

The articles generally employed as food for infants consist of arrowroot, bread, flour, baked flour, prepared groats, farinaceous food, biscuit-powder, biscuits, tops-and-bottoms, and semolina, or manna croup, as it is otherwise called, which, like tapioca, is the prepared pith of certain vegetable substances. Of this list the least efficacious, though, perhaps, the most believed in, is arrowroot, which only as a mere agent, for change, and then only for a very short time, should ever be employed as a means of diet to infancy or childhood. It is a thin, flatulent, and innutritious food, and incapable of supporting infantine life with energy. Bread, though the universal *régime* with the labouring poor, where the infant's stomach and digestive powers are reflex, in miniature, of the father's, should never be given to an infant under three months, and, even then, however finely beaten up and smoothly made, is a very questionable diet. Flour, when well boiled, though infinitely better than arrowroot, is still only a kind of fermentative paste, that counteracts its own good by after-acidity and flatulence.

Baked flour, when cooked into a pale brown mass, and finely powdered, makes a far superior food to the others, and may be considered as a very useful diet, especially for a change. Prepared groats may be classed with arrowroot and raw flour, as being innutritious. The articles that now follow in our list are all good, and such as we could, with conscience and safety, trust to for the health and development of any child whatever.

We may observe in this place, that an occasional change in the character of the food is highly desirable, both as regards the health and benefit of the child; and though the interruption should only last for a day, the change will be advantageous.

The packets sold as farinaceous food are unquestionably the best aliment that can be given from the first to a baby, and may be continued, with the exception of an occasional change, without alteration of the material, till the child is able to take its regular meals of animal and vegetable food. Some infants are so constituted as to require a frequent and total change in their system of living, seeming to thrive for a certain time on any food given to them, but if persevered in too long, declining in bulk and appearance as rapidly as they had previously progressed. In such cases the food should be immediately changed, and when that which appeared to agree best with the child is resumed, it

should be altered in its quality, and perhaps in its consistency.

For the farinaceous food there are directions with each packet, containing instructions for the making; but whatever the food employed is, enough should be made at once to last the day and night; at first, about a pint basinful, but as the child advances, a quart will hardly be too much. In all cases, let the food boil a sufficient time, constantly stirring, and taking every precaution that it does not get burnt, in which case it is on no account to be used.

The food should always be made with water, the whole sweetened at once, and of such a consistency that, when poured out, and it has had time to cool, it will cut with the firmness of a pudding or custard. One or two spoonfuls are to be put into the pap saucepan, and stood on the hob till the heat has softened it, when enough milk is to be added, and carefully mixed with the food, till the whole has the consistency of ordinary cream; it is then to be poured into the nursing-bottle, and the food having been drawn through to warm the nipple, it is to be placed in the child's mouth. For the first month or more half a bottleful will be quite enough to give the infant at one time; but, as the child grows, it will be necessary not only to increase the quantity given at each time, but also gradually to make its food more consistent, and, after the third month, to add an egg to every pint basin of food made. At night the mother puts the food into the covered pan of her lamp, instead of the saucepan—that is, enough for one supply, and, having lighted the rush, she will find, on the waking of her child, the food sufficiently hot to bear the cooling addition of the milk. But whether night or day, the same food should never be heated twice, and what the child leaves should be thrown away.

The biscuit-powder is used in the same manner as the farinaceous food, and both prepared much after the fashion of making starch. But when tops-and-bottoms, or the whole biscuit, are employed, they require soaking in cold water for some time previous to boiling. The biscuit or biscuits are then to be slowly boiled in as much water as will, when thoroughly soft, allow of their being beaten with a three-pronged fork into a fine, smooth, and even pulp, and which, when poured into a basin and become cold, will cut out like a custard. If two large biscuits have been so treated, and the child is six or seven months old, beat up two eggs, sufficient sugar to properly sweeten it, and about a pint of skim-milk. Pour this on the beaten biscuit in the saucepan, stirring constantly: boil for about five minutes, pour into a basin, and use, when cold, in the same manner as the other.

This makes an admirable food, at once nutritious and strengthening. When tops-and-bottoms or rusks are used, the quantity of the egg may be reduced or altogether omitted.

Many persons entertain a belief that cow's milk is hurtful to infants, and consequently refrain from giving it; but this is a very great mistake, for milk should form a large portion of every meal an infant takes, but it should be mixed with a proper proportion of water, being much heavier than human milk.

TEETHING AND CONVULSIONS.

Fits, &c., the Consequence of Dentition, and How to be Treated.—The Number and Order of the Teeth, and Manner in which they are cut.—First and Second Set.

About three months after birth, the infant's troubles may be said to begin; teeth commence forming in the gums, causing pain and irritation in the mouth, and which, but for the saliva it causes to flow so abundantly, would

be attended with very serious consequences. At the same time the mother frequently relaxes in the punctuality of the regimen imposed on her, and taking some unusual or different food, excites diarrhœa or irritation in her child's stomach, which not unfrequently results in a rash on the skin, or slight febrile symptoms, which, if not subdued in their outset, superinduce some more serious form of infantine disease. But, as a general rule, the teeth are the primary cause of much of the child's sufferings, in consequence of the state of nervous and functional irritation into which the system is thrown by their formation and progress out of the jaw and through the gums. We purpose beginning this branch of our subject with that most fertile source of an infant's suffering—

The Cutting of the Teeth.

That this subject may be better understood by the nurse and mother, and the reason of the constitutional disturbance that, to a greater or less degree, is experienced by all infants, may be made intelligible to those who have the care of children, we shall commence by giving a brief account of the formation of the teeth, the age at which they appear in the mouth, and the order in which they pierce the gums. The organs of mastication in the adult consist of 32 distinct teeth, 16 in either jaw; being, in fact, a double set. The teeth are divided into 4 incisors, 2 canine, 4 first and second grinders, and 6 molars; but in childhood the complement, or first set, consists of only twenty, and these only make their appearance as the development of the frame indicates the requirement of a different kind of food for the support of the system. At birth some of the first-cut teeth are found in the cavities of the jaw, in a very small and rudimentary form, but this is by no means universal. About the third month, the jaws, which are hollow and divided into separate cells, begin to expand, making room for the slowly developing teeth, which, arranged for beauty and economy of space lengthwise, gradually turn their tops upwards, piercing the gum by their edges, which, being sharp, assist in cutting a passage through the soft parts. There is no particular period at which children cut their teeth, some being remarkably early, and others equally late. The earliest age that we have ever ourselves known as a reliable fact was *six weeks*. Such peculiarities are generally hereditary, and, as in this case, common to a whole family. The two extremes are probably represented by six and sixteen months. Pain and drivelling are the usual, but by no means the general, indications of teething.

About the sixth month the gums become tense and swollen, presenting a red shiny appearance, while the salivary glands pour out an unusual quantity of saliva. After a time, a white line or round spot is observed on the top of one part of the gums, and the sharp edge of the tooth may be felt beneath if the finger is gently pressed on the part. Through these white spots the teeth burst their way in the following order:—

Two incisors in the lower jaw are first cut, though, in general, some weeks elapse between the appearance of the first and the advent of the second. The next teeth are the four incisors of the upper jaw. The next in order are the remaining two incisors of the bottom, one on each side, then two top and two bottom on each side, but not joining the incisors; and lastly, about the eighteenth or twentieth month, the four eye-teeth, filling up the space left between the side teeth and the incisors; thus completing the infant's set of sixteen. Sometimes at the same period, but more frequently some months later, four more double teeth slowly make their appearance, one on each side of each jaw, completing the entire series of the child's first set of twenty teeth. It is asserted that a child, while cutting its teeth, should either dribble excessively, vomit after every meal, or be greatly relaxed. Though one or other, or all of these at once, may

attend a case of teething, it by no means follows that any one of them should accompany this process of nature, though there can be no doubt that where the pain consequent on the unyielding state of the gums, and the firmness of the skin that covers the tooth, is severe, a copious discharge of saliva acts beneficially in saving the head, and also in guarding the child from those dangerous attacks of fits to which many children in their teething are liable.

The *Symptoms* that generally indicate the cutting of teeth, in addition to the inflamed and swollen state of the gums, and increased flow of saliva, are the restless and peevish state of the child, the hands being thrust into the mouth, and the evident pleasure imparted by rubbing the finger or nail gently along the gum; the lips are often excoriated, and the functions of the stomach or bowels are out of order. In severe cases, occurring in unhealthy or scrofulous children, there are, from the first, considerable fever, disturbed sleep, fretfulness, diarrhœa, rolling of the eyes, convulsive startings, laborious breathing, coma, or unnatural sleep, ending, unless the head is quickly relieved, in death.

The *Treatment* in all cases of painful teething is remarkably simple, and consists in keeping the body cool by mild aperient medicines, allaying the irritation in the gums by friction with a rough ivory ring or a stale crust of bread, and when the head, lungs, or any organ is overloaded or unduly excited, to use the hot bath, and by throwing the body into a perspiration, equalize the circulation, and relieve the system from the danger of a fatal termination. (*See remarks on this subject, p.* 159.)

Besides these, there is another means, namely, scarifying the gums—an operation always safe, and which, when judiciously performed, and at a critical opportunity, will often snatch the child from the grasp of death.

There are few subjects on which mothers have often formed such strong and mistaken opinions as on that of lancing an infant's gums, some rather seeing their child go into fits—and by the unrelieved irritation endangering inflammation of the brain, water on the head, rickets, and other lingering affections—than permit the doctor to afford instant relief by cutting through the hard skin, which, like a bladder over the stopper of a bottle, effectually confines the tooth to the socket, and prevents it piercing the soft, spungy substance of the gum. This prejudice is a great error, as we shall presently show; for, so far from hurting the child, there is nothing that will so soon convert an infant's tears into smiles as scarifying the gums in painful teething; that is, if effectually done, and the skin of the tooth be divided.

Though teething is a natural function, and to an infant in perfect health should be unproductive of pain, yet in general it is not only a fertile cause of suffering, but often a source of alarm and danger; the former, from irritation in the stomach and bowels, deranging the whole economy of the system, and the latter, from coma and fits, that may excite alarm in severe cases; and the danger, that eventuates in some instances, from organic disease of the head or spinal marrow.

We shall say nothing in this place of "rickets," or "water on the head," which are frequently results of dental irritation, but proceed to finish our remarks on the treatment of teething. Though strongly advocating the lancing of the gums in teething, and when there are any severe head-symptoms, yet it should never be needlessly done, or before being satisfied that the tooth is fully formed, and is out of the socket, and under the gum. When assured on these points, the gum should be cut lengthwise, and from the top of the gum downwards to the tooth, in a horizontal direction, thus ——, and for about half an inch in length. The operation is then to be repeated in a transverse direction, cutting across the gum, in the centre of the first incision, and forming a cross, thus +. The

object of this double incision is to insure a retraction of the cut parts, and leave an open way for the tooth to start from—an advantage not to be obtained when only one incision is made; for unless the tooth immediately follows the lancing, the opening reunites, and the operation has to be repeated. That this operation is very little or not at all painful, is evidenced by the suddenness with which the infant falls asleep after the lancing, and awakes in apparently perfect health, though immediately before the use of the gum-lancet, the child may have been shrieking or in convulsions.

The Diseases of Children and their Treatment.

The most common complaints of children, namely, weaning rash, convulsions, or fits, jaundice, thrush, croup, nettle rash, summer rash, mumps, scald head, worms, measles, scarlet fever, whooping-cough and chicken-pox, will be found treated on p. 159 and the subsequent pages.

For the treatment of diarrhœa in children see p. 155.

A very excellent carminative powder for flatulent infants may be kept in the house, and employed with advantage whenever the child is in pain or griped, by dropping 5 grains of oil of aniseed and 2 of peppermint on half an ounce of lump sugar, and rubbing it in a mortar, with a drachm of magnesia, into a fine powder. A small quantity of this may be given in a little water at any time, and always with benefit.

XVII. HINTS ON CORRECT SPEAKING AND WRITING.

It is readily acknowledged, by all well educated foreigners, that English grammar is very easy to learn, the difficulties of the language lying in the numberless variations and licenses of its pronunciation. Since to us then, children of the soil, pronunciation has no difficulties to offer, is it not a reproach that so many speak their own language in an inelegant and slatternly manner—either through an inexcusable ignorance of grammatical rules, or a wanton violation of them? There are two sorts of bad speakers in American society;—the educated, and the uneducated. The former should be dealt with the less leniently, because "where much is given, much will be expected." Ay, and where much has been achieved too, and intellectual laurels have been gathered, is it not a reproach that a *slatternly* mode of expression should sometimes deteriorate from the eloquence of the scholar, and place the accomplished man or woman, in *this* respect, on a level with the half-educated or the illiterate?

Some one has wisely said, "Whatever is worth doing, is worth doing well." Then, if our native language is worth studying, surely it is worth *speaking well*, and as there is no standing still in excellence of any kind, so, even in language, in so simple a thing as the expression of our thoughts by words, if we do not improve we shall retrograde.

Some people speak of "so many *spoonsfull*," instead of "so many spoonfuls." The rule on this subject says, "Compounds ending in *ful*, and all those in which the principal word is put last, form the plural in the same manner as other nouns; as "handfuls, spoonfuls, mouthfuls," etc., etc.

Logic will demonstrate the propriety of this rule:—Are you measuring by a plurality of spoons? If so, "so many *spoonsfull*" must be the correct term; but if the process of measuring be effected by *re-filling the same spoon*, then it becomes evident that the precise idea meant to be conveyed is, the *quantity* contained in the vessel by which it is measured, which is a "*spoonful*."

It is a common mistake to speak of "a disagreeable effluvia." This word is *effluvium* in the singular, and *effluvia* in the plural. The same rule should be observed with *automaton*, *arcanum*, *erratum*, *phenomenon*, *memorandum*, and several others which are less frequently used, and which change the *um* or *on* into *a*, to form the plural. It is so common a thing, however, to say *memorandums*, that it would sound a little pedantic, in colloquial style, to use the word *memoranda;* and it is desirable, perhaps, that custom should make an exception of this word, as well as of encomium, and allow two terminations to it, according to the taste of the speaker and the style of the discourse: memorandums or memoranda, like encomiums or encomia.

We have heard *pulse* and *patience* treated as pluralities, much to our astonishment.

It seems to be a position assumed by all grammarians, that their readers already understand the meaning of the word "case," as applied to nouns and pronouns; hence they never enter into a clear explanation of the simple term, but proceed at once to a discussion of its grammatical distinctions, in which it frequently happens that the student, for want of a little introductory explanation, is unable to accompany them. It is not necessary to repeat to the scholar how the term "case" is derived from a Latin word

signifying "to fall," and is so named because all the other cases *fall* or *decline* from the nominative, in order to express the various relations of nouns to each other—which in Latin they do by a difference of termination, in English by the aid of prepositions; and that an orderly arrangement of all these different terminations is called the declension of a noun, etc., etc., It is not necessary to repeat to the scholar the things he already knows; but to you, my gentle readers, to whom Latin is still an unknown tongue, to whom grammars are become obsolete things, and grammatical definitions would be bewildering preliminaries, "more honoured in the breach than in the observance"—to you we will try to explain, in the clearest manner practicable, all the mysteries of this case. We will be as brief and clear as possible, requesting you to bear in mind that no knowledge is to be acquired without a little trouble; and that whosoever may consider it too irksome a task to exert the understanding for a *short* period, must be content to remain in inexcusable and irremediable ignorance. When you come to perceive how great the errors are which you daily commit, you will not regret having sat down quietly, for half an hour, to read an unscholastic exposition of them.

We all understand the meaning of the word "case" as it is applied to the common affairs of life; but when we meet with it in our grammars, we view it as an abstruse term; we won't consent to believe that it means more than *position of affairs, condition* or *circumstances*, any one of which words might be substituted for it with equal propriety, if it were not indispensable in grammar to adhere strictly to the same term when we wish to direct the attention unerringly to the same thing, and to keep the understanding alive to the justness of its application; whilst a multiplicity of names to one thing would be likely to create confusion. Thus, if one were to say, "This is a very hard case;" or "A singular case occurred the other day;" or "That poor man's case is a very deplorable one;" we should readily comprehend that by the word "case" was meant "circumstance" or "situation;" and when we speak, in the language of the grammar, of "a noun in the nominative case," we only mean a person or thing placed in such circumstances as to become merely named, or named as the performer of some action; as "the man;" or "the man walks." In both these sentences, "man" is in the nominative case; because, in the first he is simply *named*, without reference to any circumstance respecting him; and in the second he is named as the performer of the *act of walking* mentioned. When we speak of a noun in the possessive case, we simply mean a person or thing placed under such circumstances as to become named as the *possessor* of something; and when we speak of a noun in the objective case, we only intend to express a person or thing standing in such a situation as to be, in some way or other, affected by the act of some other person or thing; as "Henry teaches Charles." Here Henry is, by an abbreviation of terms, called *the nominative case* (instead of the *noun* in the nominative case) because he stands in that situation in which it is incumbent on us to name him as the *performer* of the act of teaching; and Charles is, by the same abbreviating license, called the *objective case*, because he is in such a position of affairs as to *receive* the act of teaching which Henry performs. You may always distinguish the three cases thus: read the sentence attentively, and understand accurately what the nouns are represented as doing: if any person or thing be represented as *performing* an *action*, that person or thing is a noun in the nominative case; if any person or thing be represented as *possessing something*, that person or thing is a noun in the possessive case; and if any person or thing be represented as neither performing nor possessing, it is a noun in the objective case, whether directly or indirectly affected by the action of the nominative, because we have in English but *three* cases, which contain the substance of the *six Latin* cases. *Whatever is neither nomin-*

ative nor possessive must be objective. It is scarcely possible to commit any inaccuracy in the use of these cases when restricted to nouns, but in the application of them to pronouns a woful confusion often arises; though even in this confusion exists a marked distinction between the errors of the ill-bred and those of the well-bred man. To use the objective instead of the nominative is a *vulgar* error; to use the nominative instead of the objective is a *genteel* error. No person of decent education would think of saying "Him and me are going to the play." Yet how often do we hear even well educated people say, "They were coming to see my brother and *I;*" "The sugar will be packed in two boxes for Mr. Smith and *I;*" "Let you and *I* try to move it:" "Let him and *I* go up and speak to them;" "Between you and *I*," &c., &c.—all faults as heinous as that of the vulgarian who says, "Him and me are going to the play,"—and with less excuse. Two minutes' reflection will enable the scholar to correct himself, and a little exercise of memory will shield him from a repetition of the fault; but, for the benefit of those who may *not* be scholars, we will accompany him through the mazes of his reflections. Who are the persons who are performing the act of "coming to see?" "*They.*" Then the pronoun *they* must stand in the nominative case. Who are the persons to whom the act of "coming to see" extends? "My brother and I." Then "my brother and I," being the *objects affected* by the act of the nominative, must be a noun and pronoun standing in the objective case; and as nouns are not susceptible of change on account of cases, it is only the *pronoun* which requires alteration to render the sentence correct; "They were coming to see my brother and *me.*" The same argument is applicable to the other examples given. In the English language, the imperative mood of a verb is never conjugated with the pronoun in the nominative case, therefore "Let you and I try to move it," "Let him and I go up and speak to them," are manifest improprieties. A very simple test may be formed by taking away the first noun or pronoun from the sentence altogether, and bringing the verb or preposition right against that pronoun which you use to designate yourself: thus, "They were coming to see *I;*" "The sugar will be packed in two boxes for *I;*" "Let *I* try to move it," &c. By this means, your own ear will correct you without any reference to grammatical rules. And bear in mind that the number of *nouns* it may be necessary to press into a sentence will not alter the *case* respecting the pronouns.

"Between you and I," is as erroneous an expression as any: change the position of the pronouns, and say, "Between I and you;" or change the sentence altogether, and say "Between I and the wall there was a great gap;" and you will soon see in what case the first person should be rendered. "Prepositions govern the objective case," therefore it is impossible to put a nominative *after* a preposition without a gross violation of a rule which ought to be familiar to everybody.

The same mistake extends to the relative pronouns "who" and "whom:" we seldom hear the objective case used either by vulgar or refined speakers. "Who did you give it to?" "Who is this for?" are solecisms of daily occurrence; and when the objective "whom" *is* used, it is generally put in the wrong place; as "The person whom I expected would purchase that estate;" "The man whom they intend shall execute that work." This intervening verb in each sentence, "I expected," and "they intend," coming between the last verb and its own nominative (the relative pronoun), has no power to alter the rule, and no right to violate it: but as the introduction of an intervening verb, in such situations, is likely to beguile the ear and confuse the judgment, it would be better to avoid such constructions altogether, and turn the sentence a different way; as "The person whom I expected *to be* the purchaser of that estate;" "The man whom they in-

tend *to* execute that work." If the reader will cut off the intervening verb, which has nothing to do with the construction of the sentence except to mystify it, he will perceive at a glance the error and its remedy; "The person *whom* would purchase that estate;" "The man *whom* shall execute that work."

This fault is wholly chargeable upon the shoulders of the *educated idle;* for, except in interrogative sentences, vulgar people generally use the relative "which" in both cases, and say, "The man *which* paid me the money;" "The man *which* the money was paid *to*."

But though illiterate people may say *which* instead of *who* and *whom* with impunity, there is something too repugnant to good taste, too derogatory to understanding, in the use of a superfluous "which," in such sentences as the following, from the lips of persons of respectable education: "I know a lady living at Richmond, who had two daughters, *which* the eldest married a captain in the navy;" "I was going to the booksellers' when I met Edward, *which* I had no idea he had returned to town." Will anybody have the kindness to explain the utility of this gratuitous "which?" When people have not had the opportunity of learning, ignorance is excusable; but in ladies and gentlemen who sin with their eyes open—"Oh! the offence is rank."

It is very easy to mistake the nominative when another noun comes between it and the verb, which is frequently the case in the use of the indefinite and distributive pronouns,—as "One of those houses *were* sold last week;" "Each of the daughters *are* to have a separate share;" "Every tree in those plantations *have* been injured by the storm;" "Either of the children *are* at liberty to claim it." Here it will be perceived that the pronouns "one," "each," "every," "either," are the true nominatives to the verbs; but the intervening noun in the plural number, in each sentence, deludes the ear, and the speaker, without reflection, renders the verb in the plural instead of the singular number. The same error is often committed when no second noun appears to plead an apology for the fault; as "Each city *have their* peculiar privileges;" "Everybody has a right to look after *their* own interest;" "Either *are* at liberty to claim it." This is the effect of pure carelessness.

There is another very common error, the reverse of the last-mentioned, which is that of rendering the adjective pronoun in the *plural* number instead of the singular in such sentences as the following: "*These* kind of entertainments are not conducive to general improvement;" "*Those* sort of experiments are often dangerous." This error seems to originate in the habit which people insensibly acquire of supposing the prominent noun in the sentence (such as "entertainments" or "experiments" to be the noun qualified by the adjective "these" or "those;" instead of which it is "kind," "sort," or any word of that description *immediately following* the adjective, which should be so qualified, and the adjective must be made to agree with it in the singular number. We confess, it is not so agreeable to the ear to say, "*This* kind of entertainments," "*That* sort of experiments;" but it would be easy to give the sentence a different form, and say "Entertainments of this kind;" "Experiments of that sort;" by which the requisitions of grammar would be satisfied, and those of euphony too.

But the grand fault, the glaring impropriety, committed by "all ranks and conditions of men," rich and poor, high and low, illiterate and learned—except, perhaps, one in twenty—and from which not even the pulpit or the bar is totally free—is, the substitution of the active verb *lay* for the neutral verb *lie* (to lie down). The scholar *knows* that "active verbs govern the objective case," and therefore *demand* an objective case after them; and that neuter verbs *will not admit* an objective case after them *except* through the medium of a preposition: *he*, therefore, has no excuse for his error, it is a wil-

ful one—for him the following is not written.

Murray has nicely divided active verbs into active-transitive, and active-*in*transitive, leaving the term neuter to comprise those verbs, which signify a state of existence *without* action: as "I sleep," "I sit," "I grow," "I lie," "I die," etc. The words transitive and *in*transitive seem to us to explain themselves, for it is natural to suppose that "transitive" or *transitory*, means *passing away;* and that "*in*transitive" means *not passing away.* The term active-transitive is applied only to such verbs as describe an action taking place *in one* person or thing *upon* or *towards* another person or thing, without requiring the aid of a preposition to explain it, as "I love George." Here the act of loving is performed *by me;* but its effect is not confined *to me*, because it *passes over to* or *concerns* George, who thereby stands in the objective case because he is the *object* affected by another person's act. You perceive, therefore, that "to love" is an active verb, requiring an objective case after it; and will now know the meaning of the expression "active verbs govern the objective case," because, if I love at all, I must love *something* or *somebody*, I cannot love *nothing.*

An active *in*transitive verb is the very reverse of this, because, not admitting an objective case after it, unless preceded by a preposition, the action which the verb describes has no *object* on which immediately to fall or become *transferred to* (keep in mind the connection between this word and *transitive*), as "I laugh." Here the act is confined to the source in which it originates; I cannot say "I laugh George;" or "I laugh you;" I am not obliged to find an objective case for it at all. I may laugh from an emotion of the mind, or I may laugh, as thousands daily do, and not know why. But if I am *disposed* to find an objective case for it, I cannot do it without the intervention of a preposition, an adverb, or some other part of speech, as "I laugh at such things," "I laugh heartily," etc.

The neuter verb obeys the same law as the active *in*transitive, as "I sit," or "I sit *on* a chair;" "I sleep," or "I sleep *uneasily*;" "I grow," or "I grow *very slowly*;" "I lie," or "I lie *down*;" "I lie *on* a sofa."

"To lay" is an active transitive verb, like *to love, demanding* an objective case after it, *without the intervention of a preposition.* "To lie" is a neuter verb, *not admitting an objective case after it, except through the intervention of a preposition;* yet this "perverse generation" *will* go on substituting the former for the latter. Nothing can be more erroneous than to say, as people constantly do, "I shall go and lay down." The question which naturally arises in the mind of the discriminating hearer, is "*What* are you going to lay down—money, carpets, plans, or what?" for, as a transitive verb is used, an object is wanted to complete the sense. The speaker means, in fact, to tell us that he (himself) is going to *lie down*, instead of which he gives us to understand that he is going to *lay* down or *put* down, something which he has not named, but which it is necessary to name before we can understand the sentence; and this sentence, when completed according to the rules of grammar, will never convey the meaning he intends. One might as well use the verb "to put" in this situation, as the verb "to lay," for each is a transitive verb requiring an objective case immediately after it. If you were to enter a room, and, finding a person lying on the sofa, were to address him with such a question as "What are you doing there?" you would think it ludicrous if he were to reply, "I am *putting* down;" yet it would not be more absurd than to say "I am *laying* down;" but custom, whilst it fails to reconcile us to the error, has so familiarised us with it, that we hear it without surprise, and good breeding forbids our noticing it to the speaker. The same mistake is committed through all the tenses of the verb: how often are nice ears wounded by the following expressions, "My brother *lays* ill of a fever;" "The vessel

lays in St Katherine's Docks;" "The books were *laying* on the floor;" "He *laid* on a sofa three weeks;" "After I had *laid* down, I remembered that I had left my pistols *laying* on the table." You must perceive that, in every one of these instances, the wrong verb is used; correct it, therefore, according to the explanation given: thus, "My brother *lies* ill of a fever;" "The vessel *lies* in St. Katherine's Docks;" "The books were *lying* on the floor;" "He *lay* on a sofa three weeks;" "After I had *lain* down, I remembered that I had left my pistols *lying* on the table."

The same confusion often arises in the use of the verbs *sit* and *set*, *rise* and *raise*. *Sit* is a neuter verb, *set* an active one; yet how often do people most improperly say, "I have *set* with him for hours;" "He *set* on the beach till the sun went down;" "She *set* three nights by the patient's bedside." What did they set—potatoes, traps, or what? for, as an objective case is evidently implied by the use of an active verb, an object is indispensable to complete the sense. No tense whatever of the verb "to sit" is rendered "set," which has but *one word* throughout the whole verb, except the active participle "setting;" and "sit" has but two words, "sit," and "sat," except the active participle "sitting;" therefore it is very easy to correct this error by the help of a little attention.

Raise is the same kind of verb as *set:* active-transitive, requiring an objective case after it; and it contains only two words, *raise* and *raised*, besides the active participle *raising*. *Rise* is a neuter verb, not admitting an objective case; it contains two words, *rise* and *rose*, besides the two participles, *rising* and *risen*. It is improper, therefore, to say, "He *rose* the books from the floor;" "He *rises* the fruit as it falls;" "After she had *risen* the basket on her head," etc. In all such cases use the other verb *raise*. It occurs to us, that if people would take the trouble to reckon how many different words a verb contains, they would be in less danger of mistaking them: "lay" contains two words, "lay" and "laid," besides the active participle "laying;" "lie" has also two words, "lie" and "lay," besides the two participles "lying" and "lain;" and from this second word "lay" arises all the confusion we have had to lament in the foregoing pages.

To the scholar, it may be remarked the prevalent impropriety of adopting the subjunctive instead of the indicative mood, in sentences where doubt or uncertainty is expressed, although the former can only be used in situations in which "contingency and futurity" are combined. Thus, a gentleman giving an order to his tailor, may say, "Make me a coat of a certain description, if it *fit* me well I will give you another order," because the "fit" alluded to is a thing which the future has to determine; but when the coat is made and brought home, he cannot say, "If this cloth *be good* I will give you another order," for the quality of the cloth is *already* determined; the future will not alter it; it may be good, it may be bad, but whatever it *may be* it already *is*, therefore, as contingency only is implied, *without futurity*, it must be rendered in the indicative mood, "If this cloth *is* good," etc. We may with propriety say, "If the book be sent in time, I shall be able to read it to-night," because the sending of the book is an event which the *future* must produce; but we must not say, "If this book be sent for me, it is a mistake," because here the act alluded to is already performed—the book is come.

Some people use the imperfect tense of the verb "to go," instead of the past participle, and say, "I should have *went*," instead of "I should have gone." This is *not* a very common error; but it is a very great one; one might as well say, "I should have *was* at the theatre last night," instead of "I should have *been* at the theatre," etc., as say, "I should have *went*," instead of "I should have *gone*."

Others there are who invert this error, and use the past participle of the verb, "to do," instead of a tense of the verb, saying "I done" instead of "I *did*." This is inadmissible. "I did it," or "I *have done* it," is a phrase

correct in its formation, its application being, of course, dependent on other circumstances.

There are speakers who are *too refined* to use the past (or perfect) participle of the verbs "to drink," "to run," "to begin," etc., and substitute the *imperfect tense*, as in the verb "to go;" thus, instead of saying, "I have drunk," "he has run," "they have begun," they say, "I have *drank*," "he has *ran*," "they have *began*," etc. These are minor errors; still, nice ears detect them.

It is unnecessary to warn any of the readers of this book against adopting the flagrant vulgarity of saying "*don't* ought," and "*hadn't* ought," instead of "ought *not*." It is also incorrect to employ *no* for *not* in such phrases as "If it is true or *no* (not)," "Is it so or (not) no?"

Many people have an odd way of saying "I expect," when they only mean "I think," or "I conclude;" as, "I expect my brother is gone to Richmond to-day;" "I expect those books were sent to Paris last year." This is wrong: *expect* can only relate to *future* time, and must be followed by a future tense, or a verb in the infinitive mood, as, "I expect my brother *will go* to Richmond to-day;" "I expect *to find* those books were sent to Paris last year." Here the introduction of a future tense or of a verb in the infinitive mood, rectifies the grammar without altering the sense; but such a portion of the sentence must not be omitted in expression, as no such ellipsis is allowable.

The majority of speakers use the imperfect tense and the perfect tense together, in such sentences as the following: "I intended to *have called* on him last night;" "I meant to *have purchased* one yesterday;" or a pluperfect tense and a perfect tense together, I have sometimes heard, as, "You should *have written* to *have told* her." These expressions are illogical, because as the *intention* to perform an act *must* be *prior* to the act contemplated, the act itself cannot with propriety be expressed by a tense indicating a period of time *previous* to the intention. The three sentences should be corrected thus, placing the second verb in the infinitive mood, "I intended *to call* on him last night;" "I meant *to purchase* one yesterday;" "You should have written *to tell* her."

But the imperfect tense and the perfect tense are to be combined in such sentences as the following: "I remarked, that they appeared to have undergone great fatigue;" because here the act of "undergoing fatigue" *must* have taken place *previous* to the period in which you have had the opportunity of remarking its effect on their appearance; the sentence, therefore, is both grammatical and logical.

Another strange perversion of grammatical propriety is to be heard occasionally in the adoption of the present tense of the verb "to have," most probably instead of the past participle, but in situations in which the participle itself would be a redundance; such as, "If I had *have* known;" "If he had *have* come according to appointment;" "If you had *have* sent me that intelligence," &c. Of what utility is the word "have" in the sentence at all? What office does it perform? If it stands in the place of any other word, that *other* word would still be an incumbrance; but the sentence being complete without it, it becomes an illiterate superfluity. "If I had *have* known that you would have been there before me, I would have written to you to *have* waited till I had *have* come." What a construction from the lips of an educated person! and yet we do sometimes hear this *slip-slop* uttered by persons who are considered to "speak French and Italian *well*," and who enjoy the reputation of being "accomplished!"

Though not at all disposed to be malicious, one cannot avoid being often forcibly reminded of Byron's description of a Spanish Blue:—

"She knew the Latin—that is, 'The Lord's Prayer;'
And Greek—the Alphabet—I'm nearly sure;
She read some French romances here and there,"

Although her mode of speaking was not pure;
For *native Spanish* she had *no great care*,
At least her conversation was obscure."

It is amusing to observe the broad line of demarcation which exists between *vulgar* bad grammar, and *genteel* bad grammar, and which characterises the violation of almost every rule of syntax. The vulgar speaker uses adjectives instead of adverbs, and says "This letter is written *shocking*;" the genteel speaker uses adverbs instead of adjectives, and says, "This writing looks *shockingly*." The perpetrators of the latter offence may fancy they can shield themselves behind the grammatical law which compels the employment of an adverb, not an adjective, to qualify a verb;—and behind the first rule of syntax, which says "a verb must agree with its nominative;"—but which *is* the nominative in the expression alluded to? *Which* performs the act of looking—the writing or the speaker? To say that a thing *looks* when *we* look *at* it, is an idiom peculiar to our language, and some idioms are not reducible to rules; they are conventional terms which pass current, like bank notes, for the dollars they represent, but must not be submitted to the test of grammatical alchymy. It is improper, therefore, to say "The Queen looks beautifully;" "The flowers smell sweetly;" "This writing looks shockingly;" because it is the speaker that performs the act of looking, smelling, etc., not the noun looked *at*; and though, by an idiomatical construction necessary to avoid circumlocution, the sentence *imputes the act* to the *thing beheld*, the qualifying word must express the quality of the thing spoken of, *adjectively*, instead of qualifying the act of the nominative understood, *adverbially*. What an adjective is to a noun, an adverb is to a verb; an adjective expresses the quality of a thing, and an adverb the manner of an action. Consider what it is you wish to express, the *quality of a thing*, or the *manner of an action*, and use an adjective or adverb accordingly. But beware that you discriminate justly; for though you cannot say, "The Queen looked *majestically* in her robes," because here the act of *looking* is performed by the spectator, who looks *at* her; you can and *must* say, "The Queen looked *graciously* on the petitioner;" "The Queen looked *mercifully* on his prayer;" because here the *act* of *looking* is performed *by* the Queen. You cannot say, "These flowers smell sweetly," because it is *you* that smell, and not the flowers; but you can say, "These flowers perfume the air deliciously," because it is *they* which impart the fragrance, not you. You cannot say, "This dress looks badly," because it is you that look, not the dress; but you can say, "This dress *fits* badly," because it is the dress that performs the act of fitting, either well or ill. There are some peculiar idioms which it would be better to avoid altogether, if possible; but if you feel compelled to use them, take them as they are: you cannot prune and refine them by the rules of syntax; and to attempt to do so, shows ignorance as well as affectation.

There is a mistake often committed in the use of the adverbs of place, *hence*, *thence*, *whence*. People are apt to say, "He will go *from thence* tomorrow," etc. The preposition "from" is included in these adverbs, therefore it becomes tautology in sense when prefixed to them.

"Equally as well," is a very common expression, and a very incorrect one; the adverb of comparison "as" has no right in the sentence. "Equally well," "Equally high," "Equally dear," should be the construction; and if a complement be necessary in the phrase, it should be preceded by the preposition "with," as "The wall was equally high with the former one;" "The goods at Smith's are equally dear with those sold at the shop next door," etc., etc. "Equally the same" is tautology.

"Whether," sometimes an adverb, sometimes a conjunction, is a word that plainly indicates a choice of things; it is highly improper, therefore, to place it, as many do, at the

head of each part of a sentence, as "I have not yet made up my mind whether I shall go to France, or *whether* I shall remain in America." The conjunction should not be repeated, as it is evident the alternative is expressed *only in the combination* of the *two* parts of the sentence, not in either of them taken separately, and the phrase should stand thus: "I have not yet made up my mind whether I shall go to France, *or* remain in America."

There is an awkwardness prevalent amongst all classes of society in such sentences as the following: "He quitted his horse, and got *on to* a stage coach;" "He jumped *on to* the floor;" "She laid it *on to* a dish;" "I threw it *on to* the fire." Why use two prepositions where one would be quite as explicit, and far more elegant? Nobody, in the present day, would think of saying, "He came up to New York *for* to go to the exhibition," because the preposition "for" would be an awkward superfluity; so is "to" in the examples given; in each of which there is an unwieldiness of construction which reminds one of the process of gluing, or fastening one thing "on to" another. Expunge the redundant preposition, and be assured, gentle reader, the sentence will still be found "an elegant sufficiency." There are some situations, however, in which the two prepositions may with propriety be employed, though they are never indispensable, as "I accompanied such-a-one to Islington, and then walked on to Kingsland." But here *two* notions are implied, the walking onward, and the reaching of a certain point. More might be said to illustrate the distinction, but we consider it will not be deemed necessary.

There seems to be a natural tendency to deal in a redundance of prepositions: many people talk of "continuing *on*." Pray in what other direction is it possible to *continue?*

It is most illiterate to put the preposition *of* after the adverb *off*, as "The satin measured twelve yards before I cut this piece *off of* it;" "The fruit was gathered *off of* that tree." Many readers will consider such a remark quite unnecessary in this volume; but many others, who ought to know better, must stand self-condemned on reading it.

Some people have the bad habit of substituting one preposition for another," saying "He has had porridge *to* his supper," "Will you have an egg *to* your tea?" In the first case meaning *for*; in the second *with*.

There is a false taste extant for the preposition "on" instead of "*of*" in songs, poetry, and many other situations in which there is still less excuse for borrowing the poetic licence; such as, "Wilt thou think *on* me, love?" "I will think *on* thee, love," "Then think *on* the friend who once welcomed it too," etc., etc., etc. But this is an error chiefly to be met with among poetasters, and melo-dramatic speakers.

Some people add a superfluous preposition at the end of a sentence—"More than you think *for*." This, however, is an awkwardness rarely committed by persons of education.

Never speak of a thing looking well or ill *at* candle-light; *by* candle-light is the proper construction. *By* day or night, or any kind of light.

That "Prepositions govern the objective case" is a golden rule in grammar; and if it were only *well remembered*, it would effectually correct that mistake of substituting the nominative for the objective pronoun which has been complained of in the preceding pages. In using a relative pronoun in the objective case, it is more elegant to put the preposition before than after it, thus, "To whom was the order given?" instead of "Whom was the order given to?" Indeed, if this practice were to be invariably adopted, it would obviate the possibility of confounding the nominative with the objective case, because no man would ever find himself able to utter such a sentence as "To who was this proposal made?" though he might very unconsciously say, "Who was this proposal made

to?" and the error would be equally flagrant in both instances.

There is a great inaccuracy connected with the use of the disjunctive conjunctions *or* and *nor*, which seem to be either not clearly understood or treated with undue contempt by persons who speak in the following manner: "Henry or John *are* to go there to-night;" "His son or his nephew *have* since put in *their* claim;" "Neither one *nor* the other *have* the least chance of success." The conjunctions disjunctive "or" and "nor" separate the objects in sense, as the conjunction copulative unites them; and as, by the use of the former, the things stand forth separately and singly to the comprehension, the verb or pronoun must be rendered in the singular number also; as, "Henry *or* John *is* to go there to-night;" "His son *or* his nephew *has* since put in *his* claim," etc. If you look over the sentence, you will perceive that only *one* is to do the act, therefore only *one* can be the nominative to the verb.

Many people improperly substitute the disjunctive "but" for the comparative "than," as, "The mind no sooner entertains any proposition, *but* it presently hastens to some hypothesis to bottom it on."—Locke. "No other resource *but* this was allowed him;" "My behaviour," says he, "has, I fear, been the death of a man who had no other fault *but* that of loving me too much."—Spectator.

Sometimes a relative pronoun is used instead of a conjunction, in such sentences as the following: "I don't know but *what* I shall go to Chicago to-morrow;" instead of "I don't know but *that*," etc.

Sometimes the disjunctive *but* is substituted for the conjunction *that*, as "I have no doubt *but* he will be here to-night." Sometimes for the conjunction *if*, as "I shouldn't wonder *but* that was the case." And sometimes *two* conjunctions are used instead of one, as "*If that* I have offended him;" "*After that* he had seen the parties," etc. All this is very awkward indeed, and ought to be avoided, and might be so by a little attention.

It is obsolete now to use the article *an* before words beginning with a long *u*, or with *eu*, and it has become more elegant, in modern style, to say "a University," "a useful article," "a European," "a euphonious combination of sentences," etc., etc., etc. It is also proper to say "such a one," not "such an one."

Some people pronounce the plural of handkerchief, scarf, wharf, dwarf, *handkerchieves, scarves, wharves, dwarves.* This is an error, as these words, and perhaps a few others, are exceptions to the rule laid down, that nouns ending in *f* or *fe*, shall change these terminations into *ves* to form the plural.

There is an illiterate mode of pronouncing the adverb *too*, which is that of contracting it into the sound of the preposition *to*, thus:—"I think I paid *to much* for this gun;" "This line is *to long* by half." The adverb *too* should be pronounced like the numeral adjective *two*, and have the same full distinct sound in delivery, as "I think I paid *two* much for this gun;" "This line is *two* long by half."

One does not expect to hear such words as "necessi'ated," "preventative," etc., from people who profess to be educated, but one *does* hear them, nevertheless, and many others of the same genus, of which the following list is a specimen, not a collection.

"Febuary" and "Febiwerry" instead of February.
"Seckaterry" instead of secretary.
"Gover'ment" ,, government.
"Eve'min" ,, evening.
"Sev'm" ,, seven.
"Holladiz" ,, holidays.
"Hotting" ,, heating.
"Mossle" ,, morsel.

"Chapped" according to orthography, instead of *chopped* according to polite usage.

And we have even heard "continental" pronounced *continential*, though upon what authority we know not. Besides these, a multitude of others might be quoted, which we consider

too familiar to particularise, and "too numerous to mention."

There is an old jest on record of a person hearing another pronounce the word curiosity "*curosity*," and remarking to a by-stander, "That man murders the English language;" "Nay," replies the person addressed, "he only knocks an eye (i) out." And I am invariably reminded of this old jest whenever I hear such pronunciations as the following:—"Lat'n" for Latin, "sat'n" for satin, and Britain pronounced so as to rhyme with *written;* of which a few examples will be given below, not with the wild hope of comprising in so short a space *all* the perversions of prosody which are constantly taking place, but simply with the intention of reminding careless speakers of some general principles they seem to have forgotten, and of the vast accumulation of error they may engraft upon themselves by a lazy adherence to the custom of the crowd. Before, however, proceeding to the words in question, it may be satisfactory to our readers to recall to their memory the observations of Lindley Murray on the subject. He says, "There is scarcely anything which more distinguishes a person of poor education from a person of a good one, than the pronunciation of the *unaccented vowels.* When vowels are *under the accent*, the best speakers, and the lowest of the people, with very few exceptions, pronounce them in the same manner; but the unaccented vowels in the mouths of the former, have a distinct, open, and specific sound; while the latter often totally sink them, or change them into some other sound."

Brit'n	instead of	Britain.
Lat'n	,,	Latin.
Sat'n	,,	Satin.
Patt'n	,,	Patten.
Curt'n	,,	Curtain.
Cert'n	,,	Certain.
Bridle	,,	Bridal.
Idle	,,	Idol.
Meddle	,,	Medal.
Moddle	,,	Model.
Mentle	,,	Mental.
Mortle	,,	Mortal.
Fatle	instead of	Fatal.
Gravle	,,	Gravel.
Travle	,,	Travel.
Sudd'n	,,	Sudden.
Infidle	,,	Infidel.
Scroop-lous	,,	*Scru-pu*-lous.

And a long train of et ceteras, of which the above examples do not furnish a tithe.

Note.—That to sound the *e* in *garden* and *often*, and the *i* in *evil* and *devil*, is a decided error; they should always be pronounced *gard'n* and *oft'n; ev'l* and *dev'l.*

Some people pronounce the *I* in Irish and its concomitants, so as to make the words Ireland, Irishmen, Irish-linen, etc., sound as if they were written *Arland*, *A-rishman*, *Arish*-linen, etc. This is literally "knocking an *i* out."

It is satisfactory to perceive that the *e* in Derbyshire, Berkshire, and Berkeley, is recovering its legitimate functions; and that the affectation of pronouncing these words *Darby*shire, *Bark*shire, and *Bark*ely is fast passing away.

It is affected, and contrary to authority, to deprive the *s* of its sharp hissing sound in the words *precise, desolate, design*, and their derivatives.

Never say "Cut it in *half;*" for this you cannot do, unless you could *annihilate one* half; you may "cut it in two," or "cut it in halves," or "cut it through," or "divide it," but no human ability will enable you to *cut it in half.*

Never speak of "lots" and "loads" of things. Young men allow themselves a diffusive licence of speech, and of quotation, which has introduced many words into colloquial style that do not at all tend to improve or dignify the language, but which, when heard from *ladies'* lips, become absolutely vulgarism. A young man may talk recklessly of "lots of bargains," "lots of money," "lots of fellows," "lots of fun," etc., but a lady may *not.* Man may indulge in any latitude of expression within the bounds of sense and decorum, but woman has a narrower range—even her mirth must be subjected

to rule: it may be *naïve*, but must never be grotesque. It is not that we would have *primness* in the sex, but we would have refinement. Women are the purer and the more ornamental part of life; and when *they* degenerate, the Poetry of Life is gone.

"Loads," is a word quite as objectionable as "lots," unless it can be reduced to a load of *something*, such as a *ship*-load, a *waggon*-load, a *cart*-load, a *horse*-load, etc. We often hear such expressions as "loads of shops," "loads of authors," "loads of compliments," but as shops, authors, compliments, are things not usually piled up in loads, either for ships or horses, we cannot discover the propriety of the application.

Some people, guiltless of those absurdities, commit a great error in the use of the word *quantity*, applying it to things of *number* as "a quantity of friends," "a quantity of ships," "a quantity of houses," etc. *Quantity* can only be applied where *bulk* is indicated, as "a quantity of land," "a quantity of timber:" but we cannot say "a quantity of fields," "a quantity of trees," because *trees* and *fields* are specific individualities. Or we may apply it where individualities are taken in the gross, without reference to modes, as "a quantity of luggage," "a quantity of furniture;" but we cannot say "quantity of boxes," a "quantity of chairs and tables," for the same reason which is given in the former instances. We also apply the term *quantity* to those things of number which are too minute to be taken separately, as "a quantity of beans," "a quantity of oats," etc., etc., etc.

Avoid favourite words and phrases: they betray a poverty of language, or of imagination, not creditable to a cultivated intellect. Some people are so unfortunate as to find all things *vulgar* that come "betwixt the wind and their nobility;" others find them *disgusting*. Some are always *anticipating;* others are always *appreciating*. Multitudes are *aristocratic* in all their relations; other multitudes are as *distingués*—these two words are chiefly patronised by those whose pretensions in such respects are the most questionable. To some timid spirits, born under malignant influences no doubt, most things present an *awful* appearance, even though they come in shapes so insignificant as a cold day or an aching finger. But, thanks to that happy diversity of Nature which throws light as well as shadow into the human character, there are minds of brighter vision and more cheerful temperament, who behold all things *splendid*, *magnificent*, down to a cup of small beer, or a halfpenny orange.

Some people have a grandiloquent force of expression, thereby imparting a *tremendous* or *thundering* character even to little things; this is truly carrying their conceptions into the sublime—sometimes a step beyond.

We have, however, no intention of particularising *all* the "pet" phrases which salute the ear; but the enumeration of a few of them may make the *candid* culprit smile, and avoid those trifling absurdities for the future.

XVIII. VETERINARY MEDICINE, AND THE DISEASES OF DOMESTIC ANIMALS.

We shall commence this section of the "Household Cyclopædia" by calling the attention of farmers and others who keep horses to *some practical observations and suggestions relative to the diseases of horses.*

It is the usual practice, when treating of the diseases to which horses are subject, to give a long list of disorders, the bare perusal of which might induce a belief that the stable would be little else than a hospital, and the groom totally inadequate to the performance of his proper duties, unless skilled in a knowledge of veterinary practice. We shall avoid this, by showing the cause of disease, and means of prevention, and treat the subject in a manner so as to enable the horsekeeper readily to recognise the *nature* rather than the mere *name* of the disease, and instruct him in the use of such medicines as may in many instances be sufficient to arrest the complaint, and tend to restore the healthful functions of the animal.

Diseases mainly arise from obstructed or impaired digestion. So long as the several organs of the animal body continue to perform their due and proper parts, so long may health and strength be calculated upon; but so soon as the animal economy is disarranged, and the action of any one or more of the organs rendered less capable of its proper energy, a predisposition to disease is engendered, which the slightest exciting cause may bring into active operation.

By *predisposition to disease*, we mean that state of the animal system which is induced by bad or improper food, by want of proper attention, impurity or foulness of the stable, exposure to variations in the atmosphere, or other causes, which affect some organic and internal part of the animal structure, or impair the purity of the blood: in such a case, actual disease may not be present, or at least not perceptible by any outward indication; yet the slightest exciting cause, as sudden exposure to weather, checked perspiration or the like, may cause a serious indisposition, that, under a more favourable state of the horse's constitution, might probably have passed over without leaving any serious proof of its existence.

Pure dry air in the stable is essential to a healthy state of the blood; we need scarcely add that good nourishing food is equally essential to the well-being of the animal.

Catarrh, Cold, or Chill.—A large class of diseases may be included under these general terms, for although the horse may have what is called a cold or chill, yet if this cold or chill be neglected or improperly treated, fever or inflammation succeeds, which may terminate fatally, or leave behind a chronic cough, an evil that should be anxiously guarded against.

The first observable *symptoms* of a horse being thus attacked, are—slight shiverings; a discharge, chiefly watery, from the nose; the eyes become similarly affected; and, as the disease progresses, a cough more or less violent, with quick pulse, comes on, followed by sore throat and evident difficulty of swallowing; the discharge from the nose thickens, increases in quantity, and assumes a yellow appearance.

Treatment.—This complaint is usually cured in a few days. Confine the horse in a stable of a mean temperature, say of from 50 to 60 degrees, and clothe him warmly. If he be in good condition, take from him two to three quarts of blood, and then give him the following mixture:

Fresh powdered aniseeds and carraway-seeds, one ounce each;
Dover's powders - - - two drachms;
Balsam of sulphur - - two ounces:

Beat the balsam of sulphur into the yolk of a hen's egg, and then add the powders, mixing all well. When you give it to the horse, give it in a pint of warm gruel in which two table-spoonsful of treacle have been stirred. Repeat it every night, or on alternate nights, for three times. About an hour after the drink has been administered, give the horse a warm bran mash; and repeat the mash two or three times a day.

If the cough be troublesome, give him a pectoral mixture, made as follows: cream of tartar, and nitre, each one ounce; tincture of opium, half an ounce. Beat up, as in the former case, two ounces of balsam of sulphur into the yolk of a hen's egg, and then add the other ingredients, mixed up all together as a kind of electuary.—Dissolve it in a pint of warm gruel, and give it to the horse in the morning, fasting: do not give him any food for two hours, and then let him have a mash of scalded bran and bruised oats, and warm water. Repeat this every alternate day for three times. Clothe him warmly, give him warm mashes and warm water two or three times a day; and use him to a little gentle exercise by walking him out for a short time in the middle of the day.

Fever and Inflammation.—In our account of the preceding disease, we stated that a cold or chill was usually attended with a fever or inflammation; but that which we are now about to describe mostly arises from excess of blood, and is usually produced by removing a horse from grass and putting him too suddenly into a stable, where he is fed upon oats and hay; or by feeding him too high, with little or no exercise.

Fever, when thus induced, does not require medicine; a copious and early bleeding is the best means of cure. Bleed till faintness is produced; from one to two gallons of blood should be taken. A light and moderate diet should be given for a few days, by which time he will have recovered. A dose of eight ounces of Epsom, or Glauber's, salts may be given with advantage the day after the bloodletting, and repeated, if thought useful, on the fourth day. Let the horse be kept cool, not warmly clothed, nor in a stable where the warmth is any higher than temperate: if he be turned out into a field, when the weather is favourable, it will be as well.

Inflammation.—When to the first symptoms of this disease, usually exhibited in a heaviness, redness of the membranes under the eyelids, want of appetite, and disinclination to motion, that of delirium or madness is added, when the horse becomes violent, plunges about, and endeavours to bite everything, inflammation is then very active in operation, and must be checked. In this case a horse, after a fit of delirium, sometimes falls down, as if exhausted, and after lying for a time, gets up suddenly, and becomes as violent as ever. The treatment in this is the same as in the previous case, early and copious bleeding, but to a greater extent; he must now be bled until perfectly free from delirium, and at least two to three gallons of blood must be taken. In other respects the remedial treatment may be the same as in the preceding case.

Staggers.—This is also an inflammatory disease, but is produced by different causes to either of the preceding: staggers are usually the consequence of improper feeding, or rather of unwholesome food, as bad or foul hay, or rank grass; and are evidently induced by a cause which impairs the digestive system, and leaves the stomach distended with undigested food. This disease is called by a variety of names, as lethargy, apoplexy, epilepsy, vertigo, convulsions, etc.; it presents itself under two distinct forms, which may be described as sleeping staggers, and mad staggers.

When the *sleeping staggers* attack a horse, he hangs his head, as if unable to hold it up; is dull and inactive, and frequently falls asleep, even while eating, and with the food in his

mouth: he reels, or staggers about, as if intoxicated, and sometimes falls down insensible; the eyes appear watery and inflamed, and often, as well as the mouth, have a yellow cast about them: the pulse is very unequal, now slow, and then quicker than usual.—When, to the watery running of the eyes and the deep stupor which attacks the horse, these are succeeded by paroxysms of violence and delirium, the animal plunging about, and beating himself against whatever stands in his way, a wild and unconscious look in his countenance, the disease may then be termed *mad staggers*, inflammation of the brain being now present.

As soon as the fit or attack of mad staggers is over, the horse falls down as if quite inactive for a few minutes; his eyes become dim, and his limbs stretch out, as if dying: his fits, however, soon resume their impetuosity, and he becomes more furious than ever. In this state it is dangerous to approach him; while, if nothing be done to alleviate the disease, it terminates fatally.

The best remedial *treatment* for this disease in either state, is early and copious bleeding, taking from four to six quarts of blood at once, and again in five or six hours, if necessary. Beat up into a ball the following ingredients, and give it immediately after bleeding: Castile soap, two drachms; calomel and assafœtida, each, two drachms. The following purgative mixture should be given immediately after the ball: aloes, seven drachms; Castile soap and ginger, each, two drachms; Epsom salts, four ounces: the aloes and ginger should be powdered together, and then well mixed with the other ingredients, in a pint-and-a-half of rue-tea; simmer the whole about ten minutes, and give it milk warm.

The mixture will assist the operation of the ball, and clear the stomach of the undigested mass by which it is clogged. If the medicine fails to operate briskly within ten or twelve hours, the rectum, or last bowel from which the dung is voided, should be emptied by a small hand, and the following clyster administered: water, warm, one gallon; Glauber's salts and treacle, each, four ounces; sweet oil, half a pint. The treacle and salts should be dissolved in the warm water, and the oil then added.

Before this clyster is administered, the lump of undigested matter, or hardened dung, the chief cause of the disease, should be taken away: to do this, let a small hand be dipped in the clyster, or rubbed with sweet oil, and gently passed up the fundament, till it feels the dung, which it should then bring away. Then administer the clyster with a pipe about twelve inches long, and a strong bladder, with the clyster in it, fixed at one end, through which the clyster should be forced by twisting the bladder with your hands. As soon as it is passed into the horse, take away the pipe, and instantly hold a wisp of straw to the fundament for about ten minutes. This is a better way of administering a clyster than when given by a syringe.

Inflammation of the Bowels.—Like the preceding, this is an inflammatory complaint, and has a number of names, as enterites, gripes, inflammatory colic, &c.—Over exertion, sudden change of temperature, drinking cold water while heated, or greedily eating of new hay, grass, or new corn, may induce it; but as it impairs the healthy action of the intestines, it must be removed, or it increases in virulence and often terminates fatally.

The presence of the complaint, usually first exhibiting only *windy colic*, is indicated by the horse often lying down, and suddenly springing up again; he refuses his food, stamps with his fore feet, and strikes his belly with his hind feet: his body is convulsed, his eyes turn up, and his limbs stretch out with a spasmodic motion; his ears and feet are sometimes hot and again cold; he falls into a profuse perspiration, which is succeeded by shivering fits; his endeavours to stale, evidently painful, are without success; he continually turns his head towards his flank, as if pointing out the seat of

pain; he then falls down, rolls over, and turns on his back.

The more advanced stage of the complaint is attended with fever, heat and dryness of the mouth, tongue white, skin hot and dry, except about the ears, which are mostly cold; continued pain in the belly: he lies down, and rises again suddenly, but, in this stage of the disease, he does not turn on his back; pulse quick and small; and breathing short and quick.

If the pulse be quick, hard, and small, and any fever exhibit itself, then the inflammation has attacked the intestines, and the remedial means must be immediately applied: of these, copious bleeding is the first and most efficacious: five or six quarts of blood should be taken at once; and if the symptoms do not abate, the bleeding should be repeated a second, third, and even a fourth time; but not so copiously as at first, the quantity being reduced to quarts, and at last to as many pints. After the first bleeding, give him a clyster, in the very same manner as recommended in the preceding complaint, the small hand being used to remove the hardened dung, which is almost always present in these cases. Repeat the clyster every three hours, for two or three times, till successful.

As soon as the first clyster is given, prepare and give the following drink: —Castor-oil (by weight), 24 ounces; tincture of opium, half an ounce; warm gruel, one quart. Repeat this in about twelve hours, if a passage through the intestines be not previously obtained.

When the feverish heat has abated, the appetite partially returned, and the horse in a fair way of recovery, the following restorative drink, given milk warm, will be useful:—Aniseeds and caraway-seeds, each, half an ounce; ginger and Castile soap, each, half an ounce; nitre and Peruvian bark, each, 1 ounce; tincture of opium, 2 drachms; lenitive electuary, 4 ounces. Mix these ingredients in a quart of warm gruel, and give it every morning, or every other morning, fasting, for three or four times.

The *Yellows*, or *Jaundice*, is a disease which rarely appears by itself; it is usually accompanied by some disease of the internal organs, its principal symptoms are—a yellowness in and about the mouth, and the inner parts of the eyes and eye-lids; the urinary fluid is of a similar colour, and the dung generally hard; the animal is dull and heavy, loses his appetite, has usually a low fever, and becomes weak and spiritless.

To cure this disease, first bleed the horse, more or less, according to the fulness of blood in the animal, or extent of the fever; but not copiously, unless inflammation be indicated by the pulse being quick and strong, and the extremities be unusually cold; in such cases, bleed more copiously, and afterwards inject the clyster in the way prescribed on a previous page, repeating it once or twice in the same day. About two hours after the bleeding, give a ball made up of the following ingredients:—Barbadoes aloes, 2 drachms; powdered myrrh and Castile soap, each, 2 drachms; calomel, half a drachm; Tartar emetic, 1 drachm. Make it up into a ball with honey, and repeat it once a day until it purges; after which, if fever still exists, give the following fever ball:—Antimonial powder, 2 drachms; Castile soap and camomile powder, each, 2 drachms; camphor and honey, each, 1 drachm; nitre, half an ounce. Mix the several ingredients into a ball with honey, and give it, repeating it a second or third time, which will generally be found sufficient.

Should the bowels have been relaxed from the beginning, do not give the ball with the aloes, but substitute the following instead:—Cascarilla, powdered, 2 drachms; Tartarised antimony, 1½ drachm; opium, 1 drachm; Calomel, half a drachm. Form it into a ball with honey, and repeat it, daily, till the bowels are restored, when you may give the fever ball above prescribed.

Inflammation of the Lungs. — The term by which this disease is known among medical men, is Pneumonia. Its first appearances are—a shivering fit, extreme dulness, unwillingness to

move, loss of appetite, and quickened breathing. If not removed, more decided symptoms succeed, as, coldness of extremities, oppressed pulse, expanded nostrils, considerable heaving of the flanks, purple tinge of the nasal membrane, redness about the eye, a fixed wide position of the fore quarters; should he attempt to lie down, a great difficulty of breathing; countenance betokening pain, and mouth hot and dry.

The *causes* of this disease are, usually—immoderate exertion, and suddenly-suppressed perspiration, induced by sudden changes from heat to cold, or the contrary. The best method of cure is to bleed freely, from one to two gallons, taken quickly from a large orifice, to give immediate relief to the head and arteries: in six or eight hours bleed again, but in less degree. If the horse faint before you take the quantity of blood, pin up the orifice, and give a clyster (see page 378), repeating it once or twice, if necessary; and if the bowels be not opened soon, give also the following drink:—Epsom salts, 6 ounces; castor-oil, 4 ounces; coarse sugar, 3 ounces. Beat up the yolk of an egg into a pint and a half of tea, then well mix up the above ingredients into it, and give it milk warm. But if the bowels be not bound, then instead of the above, give the following:— Nitre, half a drachm; digitalis, 1 drachm; emetic tartar, 2 drachms. Made into a ball with aromatic confection. The horse, especially in winter, must be kept warm, not by hot air, but by a body cloth and hood, and his legs should also be bandaged,—hot air acts as a kind of poison on fevers or inflammations, and increases every kind of inflammation; pure, cool, dry air will assist; and in the course of a day or two the symptoms will abate, and the appetite will return.

Fevers.—This disease, or rather the diseases known by this name, are of two kinds, the *symptomatic fever*, and the *low fever*, and they differ essentially in symptoms as well as treatment, from the inflammatory class of diseases, which arise mostly from plethora, or fulness of blood; fevers, on the contrary, are as likely to attack horses in low condition as those in a better state. In most inflammatory diseases, blood letting is the first and principal means of cure, and that is followed up by a course of medicine which has the effect of reducing the plethoric habit, or tendency to over-fulness of blood; in fevers, on the contrary, blood-letting is to be more sparingly had recourse to, and sometimes its omission is preferable; and the other means of cure are usually of a more invigorating kind, cordials, rather than laxatives, being then mostly administered.

Symptomatic Fever.—The first symptoms of this disease, which is so gradual in its early stage as sometimes to escape notice for a time, are dulness and heaviness, the head hanging down, and a disinclination to move about, followed usually by chilliness, a staring coat, coldness equally on the surface as at the extremities, and often accompanied by a shivering fit; to these earlier symptoms succeed a warm skin; mouth hot and dry; eyes and inner membrane of the nose of a reddish appearance; pulse quick, full, and hard; respiration irregular and laborious, but rapid; loss of appetite, costiveness, urine high-coloured but diminished in quantity. This disease sometimes appears as an epidemic, affecting great numbers of horses, and leaving traces, after the best treatment, of the severity of its attacks; at other times, its appearance is more partial, and confined to particular districts, and even to particular horses.

Cure.—The first means of cure, in this disease, is a partial blood-letting, not taking much blood at a time, nor repeating the operation too often; this should be followed by a mild laxative ball, prepared as follows:

Mild Laxative Ball.— Barbadoes aloes, 4 drachms; Antimonial powder and Castile soap, each 2 drachms; linseed meal, 2 drachms. Mix it up with honey into two balls, and give one immediately after the bleeding;

the other not till after four and twenty or thirty hours, and not at all if the horse be purged to any extent.

If a draught be preferred, the following is a good one in this case :

Laxative Drink.—Barbadoes aloes, powdered, three drachms; carbonate of soda, two drachms. Dissolve these in rather more than one-third of a pint of hot water, and add eight ounces of castor oil.

After either of the above has been administered, the fever may be reduced by the following

Fever Ball.—Nitre, two ounces; Antimonial powder, half an ounce; liquorice powder, one ounce; camphor, two drachms. Form these into two equal sized balls, with honey, and give the second about eight or twelve hours after the first.

This treatment is usually effective, if warm mashes and warm water is given as soon as the disease is detected, and proper attention be paid to the stable management, particularly by making the stable itself clean, sweet, dry, and temperate in warmth, but not close and hot.

The following is an excellent restorative medicine, where much debility remains after the fever has subsided :

Restorative Ball.—Camomile powder, one ounce; carbonate of iron, and gentian, each one ounce; Antimonial powder, two drachms; opium, powdered, one scruple; oil of aniseed, two scruples. Mix with honey into two balls, and give one each day.

Low Fever.—The disease has often been mistaken for and confounded with other and more decided complaints; and this, perhaps, is scarcely to be wondered at when it is considered that it is the very disease which, under the name of *murrain*, and a host of other appellations, in former days, was looked upon as little less than a plague, and whose ravages were attended with such fatal consequences to the agriculturist; nineteen out of every score attacked having fallen victims to its virulence. The progress of the disease is rapid, and the result too often fatal. In some cases the lungs and heart are attacked; in others, the liver and bowels; while in some cases the disease exhibits itself on some external part of the body.

From the preceding statement it will be seen that the symptoms vary materially; they, however, usually take something like the following appearances : a general alteration in the circulation, and feeble, rapid pulse; weakness, prostration of strength, and determination of blood to particular but very different parts of the animal, by which pain is produced, with a tendency to inflammation, but not of any decided character. When this disease attacks neat cattle, it becomes *quarter-ill*, *black-quarter*, or *joint-felon*; and in the horse, it is not uncommon for the feet, particularly the hinder, to be affected.

Mode of treatment and cure.—Local bleeding, but not to any great extent, from the vein nearest to the apparent seat of disease; but if the symptoms appear to be more general, then bleeding should be more in quantity, and may be taken from the neck vein; after bleeding, put the horse in a perfectly sweet, cool stable, if in summer; or in one of only a temperate atmosphere, if in winter : too much warmth is more likely to retard than to accelerate a cure, but cold draughts or cold stables must be very carefully avoided. If feverish symptoms appear, the mouth becoming hot and dry, and the eyes and nostrils affected, give the *fever ball*, as directed in opposite column, and afterwards, or when from the non-appearance of the feverish symptoms the *fever ball* is not necessary, give at each dose, half an ounce of nitrate of potash three times in the day, early in the morning, at noon, and again at night. A clyster, composed of water, four quarts; salt, one large handful; with a little hog's lard or sweet oil added, should be applied, and repeated if the bowels be not open. The horse's diet should consist of either green food and a little sweet hay, or bran mashes and a little sweet hay; corn must not, on any account, be given.

When the disorder is subdued,

there will be found a considerable degree of weakness and debility left behind: to restore a healthy tone, the *restorative ball* may be given; but the food must be light, and easy of digestion, very little corn must be given for some time, and then with caution; for until the digestive organs have recovered their tone, corn will rather oppress the stomach, and prove a fresh source of evil: the nitrate of potash should be continued to be given, but in reduced quantity, say half an ounce at each dose twice a day, and after a week or two, only once a day, until the horse is restored to health: it is the best and most innocent diuretic medicine that can be given to a horse.

Diseases of the Digestive Organs. Costiveness.—We call this a disease, but it is rather the source of disease. All domestic animals are subject to it, and persons having the charge of domesticated animals should endeavour, by proper, regular feeding, to preserve health, of the presence or absence of which the well-regulated appetite and due performance of the digestive process afford proof not likely to deceive.

A *loss of appetite* is one of the usual early evidences by which indigestion is detected; but this cannot always be depended upon. We must, therefore, rather judge of the symptoms by the effects, and, by these means, the real cause of the obstruction—for such it is—of the digestive process may be better ascertained, and the more eligible and appropriate remedy applied.

Anything which interferes with mastication, or properly chewing the food, is injurious—hence, eating too fast, or the stomach being overloaded, is likely to produce indigestion. In eating too fast, the important office which the teeth have to perform, that of *well chewing the food*, and thereby intimately mixing it with the saliva, or spittle, is very imperfectly done, and the food is consequently swallowed in a crude unprepared state for the further processes of digestion. When the stomach is overloaded, particularly if the horse has previously endured a longer fast than usual, the powers of some of the vital organs are exhausted. and a *surfeit* takes place.

Over drinking is another cause; generally, horses have not water enough given them, but are allowed to get very thirsty, and they are then likely to drink too largely when they feed; in which case it is apt to force the food from the stomach before it has had time to undergo the proper preparative process required to fit it for digestion, and *fermentation* often ensues. Putting a horse to hard work on a too full stomach will produce indigestion; as in this case the weakened organs are oppressed; and the food, not undergoing the necessary digestive change, forms a load dangerous to the animal, and produces the worst symptoms of fermentation. One of the frequent consequences of this stage of the complaint is *acute foot founder*. Another cause, somewhat similar in its results, is that of horses feeding on impure hay or old high-grown grass: the fibrous particles mat together, and accumulate in the rectum, or that hinder part of the bowels of the horse into which clysters are injected; and unless removed, and the digestive process restored, the worst results may be anticipated. And, lastly, we may notice *sourness of the stomach*, and impurity of the stable, that is, either a neglected, dirty, or wet stable.

Having thus detailed the principle causes of indigestion, we shall now give the more immediate symptoms arising from the several causes, adding the means of cure in each case.

In cases of overloaded stomach, when fermentation ensues, the most fearful consequences may be produced. The horse may be seized on the road, and if pushed too fast, it may cause certain death. He slackens his pace, wishes to stop, and attempts to lie down; or falls as if knocked down the moment he stops. If at slow work, he seems unwilling to stand, and sometimes he quickens his pace. In the stable he paws with his fore feet, lies down, rolls over, or lies on his back. If the stomach be not much distended,

he may be rather still for two or three minutes; but when it is, he is particularly restless, no sooner down than he rises again, starting all at once, and again throwing himself down violently. He strikes at his belly with his hind feet, turning his eyes towards his flanks, as if conscious that there was the cause of his pain. If not relieved, the symptoms increase in violence, the pain becomes more intense, the perspiration is profuse, the belly is swollen, and the agony of the animal's sufferings appears extreme; till death puts an end to the animal and its sufferings together.

Remedy.—The means of cure are first to arrest the fermentation, and then to restore the digestion to a healthy state; to do this, give a drench composed of powerful stimulants and carminatives, as either of the following: Linseed oil (raw), one pound in weight; oil of turpentine, two or three ounces; or, hartshorn, ten or twelve drams; or chlorate of lime, eight drams, given in a little warm water. A clyster may be given if the symptoms do not abate, or if the medicine does not operate beneficially. Let the clyster be composed of weak, warm gruel, one gallon; soft soap, two ounces,—(if soft soap cannot be readily obtained, substitute two handfuls of salt)—aloes, two ounces. Inject this by means of a bladder and pipe, taking care to oil the pipe well, and gently insinuate it, before you force up the fluid.

If this clyster does not speedily produce the desired effect, you may conclude that the rectum is clogged with some hard indigestible mass, which can only be removed by the hand, and the sooner this is done the better.

In half an hour, or a little more, if no relief has been affected, a second dose may be given, and if that fail, in another half hour a third dose may be administered.

Where the symptoms are not violent, and loss of appetite is the principle indication, the following tincture (which should be kept ready prepared for use) may be given, and will usually prove sufficient, with a few warm mashes and proper stable attention. *Tincture for indigestion.*—Good spirits, whisky or brandy, one quart; ginger and cloves, of each, three ounces; put them in a stone bottle, and let them stand at least eight days, that the spirit may extract all the virtue from the ginger and cloves; then add of sweet spirits of nitre, four ounces. Half a pint of this tincture is a dose, given in two pints of warm water.

If you have not prepared the above, and the case be urgent, give of spirits, whisky or brandy, half a pint diluted with a pint of warm water, adding thereto one to two ounces of tar.

But observe,—in both these cases, when the drink or tincture has been given, the abdomen or belly of the horse should be well but gently rubbed, the animal walked slowly for a time, and then be allowed the benefit of a good bed, so that he may have room to roll about.

Farcy.—This is a disease of the absorbents—those internal organs, the proper action of which carry on the digestive process, and promote the animal's health; but which, when impaired or diseased, produce a derangement of the healthy functions, and terminate in some chronic disease, or end in death. The peculiar characteristic of farcy is, that it is the first symptoms of a disease, which if not the same as glanders, is marked in several respects as very similar, and ultimately terminates in that contagious and incurable scourge of the stable.

The first appearance of farcy is indicated by small tumours, or hard lumps, with a sort of communication like corded veins; these lumps usually appear on the inside of the thigh and fore legs, but are not necessarily confined to these parts, sometimes appearing upon the shoulders, about the ribs, on the cheeks, and other parts of the body. These lumps somewhat resemble what are termed *surfeit lumps*, but differ from them when they break, in not gradually drying up and getting well; the farcy buds, when they burst, forming a small peculiar kind of ulcer, which, if not removed

by the proper means, become larger, more numerous, and very offensive, until the horse is glandered—the too general result of this pestilential disease.

This disorder rarely yields to medicinal treatment, from the reason, perhaps, that its real seat is internal, and has taken hold of the system even before its external appearance is indicated. However, as it has been successfully treated, we will suggest that, if the horse be worth the expense of a cure, the attempt be made; but it should be under the advice of a veterinary surgeon, as requiring more skill and experience than usually fall to the share of the groom.

Glanders.—This is the most malignant, most pestilential, and most incurable disorder to which horses are subject, and is as fatal to them as hydrophobia to dogs; it is also highly dangerous to the stable helpers, being, like canine madness, communicable to the human subject, and equally fatal to them as to the animal by whose deadly bite the inoculation takes place. Its contagious character is another of its fearful accompaniments, rendering it the bane of society, the scourge of the stables, and the ruin of many a horse proprietor.

Our suggestions in reference to this pestilential disease, will be as to the means of prevention or detection; for as to cure, all attempts would be useless, and any advice would therefore be superfluous.

The principal means by which this disease is communicated is by contagion. Hot, impure, and dirty stables may no doubt have induced it; and excessive work, with poor living, may also so impair the animal's constitution as to predispose it to receive this or any other infectious disease. Supposing, however, the horse to be sound, and moderately well kept and attended to, and his stable clean and well ventilated, we may then assert that, although a horse be brought into immediate neighbourship (as in a team together), but not into actual contact, with another attacked with glanders, the disease will not be communicated to the healthy horse, except by positive contagion, or rather inoculation.

Most persons understand that inoculation means the conveying into the blood, or some other of the internal vessels or organs, the virus or matter taken from some other animal or subject. Now, in the case under consideration, we will suppose that the infectious matter exists, and may have tainted the water-pail, the manger, or other part of the stall, or the like, particularly as the running from the nose of the glandered horse is very contagious. A sound horse is introduced into the stable, and drinks out of the same pail, or trough, or eats from the same manger, or his nose touches or he rubs himself against some part of the stall which has been in contact with the diseased horse; the moment the contact takes place, the absorbent or sponge-like action ensues, either by means of the nostril receiving the infectious virus, or some part of the skin being injured, the inoculation is made, and the sound horse will, in a very short time, exhibit ample evidence that the contagious characteristics of this fell disease have been communicated.

This disease, incurable as it is ascertained to be, is not however equally rapid in its progress in all horses; in some its deleterious poison is speedily conveyed over the whole system in a very few weeks, and the result is speedily fatal; while in others it progresses so tardily, that the animal appears scarcely to suffer by it for a considerable space of time; its result, however, even in these cases, is equally certain, although more remote, and after undermining the constitution of the animal, will eventually cause its premature dissolution.

The moment that glanders is believed to have made its appearance, be careful to separate the suspected horse from the rest, and under no circumstances permit any of the others to come into contact with him: the manger he eats from, the pail he drinks from, the brush or comb used in dressing him, must all be kept from touching any other horse. In a few

days, perhaps a week or two, your suspicions will be removed or confirmed. If it be glanders, a perceptible prostration of constitutional vigour will be apparent, the membrane of the nose will be ulcerated, and will have a glutinous discharge, and the lungs will subsequently be ulcerated : little if any fever appears in this disease ; and in this respect it differs from other diseases in which the nostrils discharge a mucous (not glutinous) discharge. A test is recommended, to prove the fact of glanders, or not, which is to let the matter from the nose drop into a pail of water—if it be glanderous, but not without, it will sink to the bottom. This, though not an infallible test, is a very good one. However, as soon as you have good reason to believe that glanders really does exist, call in the veterinary surgeon, and act under his advice ; or if the animal be not worth the expense likely to be incurred (a cure cannot be for a moment calculated upon), let the next consideration be to terminate the glanders and its existence together.

Wounds. — Having treated of the principal internal diseases of horses, we shall now say a few words on wounds : here cause and symptoms are not necessary, the wound furnishing evident proof of its nature and existence ; our remarks will, therefore, have only reference to the means of cure.

Wounds are—*simple*, as cuts, or the like ; or *compound*, as broken and lacerated : the first are easily treated ; little else being generally necessary than to bring the divided parts together carefully by means of the needle and thread, and a few stitches through the skin only : an adhesive plaster should then be fixed on the sides of the wound near its edges, after which it should be dressed with a soothing balsam, or tincture of aloes, and the whole secured by a bandage.

Where the ends of the wounded skin are so far apart as not to admit of bringing them together by the needle and thread, apply a poultice or fermentation ; and if the part form into a swelling, and be about to break, you may accelerate this by using the following digestive liniment :—Olive oil, fresh and good, 4 ounces ; spirits of turpentine, 1½ ounce ; tincture of camphor, 1 ounce ; tincture of opium, 1 ounce. When you make this, mix the whole well together with the yolk of a fresh egg, and bottle it for use. Apply it freely, warm, to the wound, but do not touch the surrounding swelling—that must be bathed with evaporating lotion. When the wound has broken, wash the part clean with warm water, and dress it daily with a soothing balsam. If proud flesh appear, it must be kept down by a careful application of some caustic, which you had better purchase where you can ask advice how to use it.

Compound or fractured wounds require a different and more careful treatment ; and the aid of the experienced farrier or veterinary surgeon ought, in these cases, to be called in—it is generally the cheapest, and always the safest mode of proceeding.

If the horse be slightly bruised at any time, the following application will be found useful, if well mixed together and applied :—Vinegar and spring water, each, 6 ounces ; sal ammoniac, 2 ounces ; tincture of camphor, 2 ounces ; tincture of aloes, 1 ounce.

Wounds are often attended with local inflammation ; that is, the part injured becomes hot, swollen, and painful ; it is, in this case, said to be inflamed. When inflammation is thus local, and external, warm fomentations, or poultices (which is a kind of fomentation), or cold applications, may be applied with advantage, according to circumstances. Fomentations, by opening the pores of the skin, promote perspiration, and so decrease the swelling, and lessen pain ; while cold applications promote evaporation, and so assist in restoring health to the part affected.

Clean hot water is the best FOMENTATION : it should be used as hot as can be without paining the horse ; continue to foment the part affected for some time, having a fresh supply of hot water ; half an hour is the least time a fomentation should be con-

tinued. A sponge is useful to foment with, especially if the leg be the part to be fomented.

The good effects of this fomentation will be lost, if the process be not continued long enough, and a continued supply of hot water furnished: it is upon the continued warmth of the water used that the goodness to be derived from the process depends; when sufficiently fomented, clothe the part, so as to retain the warmth till thoroughly dry; or the coldness that will succeed will prove injurious, by the check which it will necessarily give to perspiration.

Fomenting the legs of a horse, after a day of extraordinary exertion, is useful, and may be used with much advantage to the animal.

Poultices.—In most kinds of wounds poultices are particularly useful, as they reduce inflammation, allay pain, and tend to cleanse and heal the injured part: in broken knees they are especially good, as well as in all injuries of the foot. Moisture and warmth are the essential qualities of poultices, and it is from these qualities that the benefit is obtained. Those articles, therefore, which the longest retain heat, are the best for the purpose. They should be applied as warm as they can safely be borne; but not too hot, or unnecessary pain is inflicted, nor tied on too tight [a too common practice] or the circulation of blood may be impeded, and the inflammation increased thereby.

Linseed meal longest retains both heat and moisture, and therefore forms the best material for a poultice: even when any other ingredient is preferred, some linseed meal should be used with it. Mashed turnips, crumb of bread, or thick oatmeal gruel, are all good. Warm bandages, often renewed, act something in the same manner.

Where lotions are necessary to bathe a wound or inflamed part, the following may be used with good effect:—Super-acetate of lead, two drams; sulphate of zinc, two drams; water, half a pint.

If an additional half dram of super-acetate of lead be used, and the mixture well filtered through a bit of cloth, or fine sieve, it makes a good lotion for an inflamed eye.

Or, very useful in inflammations:—Sal-ammonia, half an ounce; distilled vinegar, two ounces; spirits of wine, four ounces; spring water, eight ounces. Cold water, with one sixth its bulk of vinegar, or a similar quantity of brandy, makes a very good cooling lotion.

Diseases of Poultry.

On this subject, the Poultry-keeper should always bear in mind the good old adage, that "Prevention is better than cure." Turkeys and other fowls which are properly housed, fed, and treated, will very rarely suffer from illness. Cases that require peculiar treatment may, however, occur to persons who are most careful in the management of their feathered charge; and poultry may become diseased from the negligence of keeping them close, or other incidental circumstances; therefore, a few observations on the diseases to which fowls are liable, will be requisite.

During the period of moulting, or casting their feathers, birds are not so stout and hardy as at other times, and they should then be kept comfortably warm, and provided with somewhat stimulant food, as oats, hemp-seed, sunflower-seed, etc., and now and then a few coriander seeds. Protection is particularly necessary if the season should happen to be unusually cold or damp. Birds naturally moult, or change their feathered clothing; but when neglected, they sometimes lose their feathers without any fresh ones being produced; and this is a disease which requires warmth and plenty of wholesome food, and good sweet water. Half a dozen pepper-corns, or a small teaspoonful of caraway-seeds may also be given every day, for a short time.

Fowls, sometimes, when ill-fed, and kept in a close damp place, are afflicted with what is called the *roup*. The symptoms of this disease are, swellings about the eyes, running

from the nostrils and mouth, with offensive odour, general weakness, and loss of appetite. In such cases the head may be bathed with warm water, or milk and water, and carefully dried afterwards; warm, but airy lodging, must be provided; and boiled potatoes, or oatmeal made into a paste with milk, given for food; and occasionally a clove of garlic beat up with a little of the oatmeal paste, and made into pills, may be put down the throats of the feathered patients.

The *Pip* is a disorder which sometimes destroys whole broods of young turkeys and chickens. The disease is characterized by the formation of a tough, dense white membrane on the tongue, and back part of the mouth; with loss of appetite, and feverish restlessness; and unless speedily relieved, the chick becomes quite blind, and soon dies. The first thing to be done towards the cure is, to scrape away the white membrane with the nail of the fore or little finger, and then wet or rather wash the mouth, particularly the tongue, with a piece of rag dipped in a weak solution of alum, and afterwards, for a day or two, anoint the parts affected, with a feather dipped in a liniment made by mixing as much burnt alum, or powdered borax, as will lie on a sixpenny piece, with a small teaspoonful of honey. The Pip is supposed to be caused by drinking foul water, therefore the utmost care should be taken to furnish the fowls with pure, sweet water. They may be fed with oat or barley meal made into a stiff paste with water.

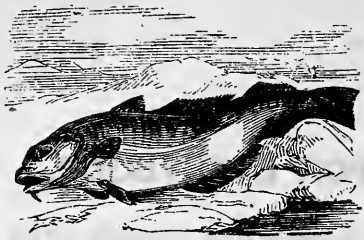
The *Gapes*. Among the disorders to which all gallinaceous birds are subject, that called the gapes is, perhaps, the most formidable. It seizes chickens when about three weeks old, and is attended with a frequent gaping or gasping for air, shiverings, ruffled feathers, want of appetite, and sometimes running from the mouth. This disease is caused by a kind of animal like a small double-headed worm, which becomes fixed to the inside of the windpipe, and which causes inflammation and speedy death if not removed. In such cases, fumigation with tobacco has been recommended. This operation is to be performed by putting the afflicted chicks into a common wooden box, and then passing into it, by means of a tobacco-pipe, a quantity of the smoke. This is to be managed very cautiously: the box must not be shut quite close, nor the birds kept too long in it at a time, or they will be stifled. Another, and perhaps a safer mode of treatment, will be to put a few grains of common salt as far back in the mouth of the chicken as possible, and repeat it in a few hours. By either of these methods, the birds may be enabled to get rid of the worm which causes the mischief; and which, when its adhesion has been loosened, may be removed from the throat by a small feather dipped in sweet oil. Keep the patients warm, and feed them with sopped bread-crumbs, or oatmeal paste, for a few days; and be sure that they have good water to drink. A large keeper of fowls, using nothing but boiled water for young chickens, states that in his experience this prevents the gapes appearing.

The *Turn, or Giddiness; Stoppage in the Crop*, and such other diseases as occur when fowls are in good condition, are the best treated by twisting their necks, or killing them in any other manner, while they are fit for the table.

Skin diseases rarely take place when fowls are kept clean, and in places properly ventilated, and well supplied with plenty of fine gravel, sand, or sifted coal ashes, with which they can, themselves, cleanse their feathers. If through neglect they do become thus diseased, a little flower of sulphur may be sprinkled between their feathers often till they get well, or common black brimstone may be mixed with the sand, etc., with which they are furnished to dust themselves in.

Wounds, or Ulcers, caused by fighting, or by accident, should be kept clean, and the parts anointed lightly with Venice turpentine.

For Diseases of Dogs, see p. 286.



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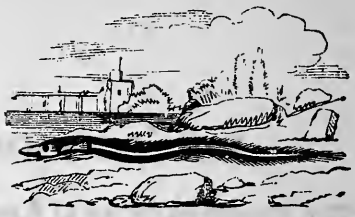

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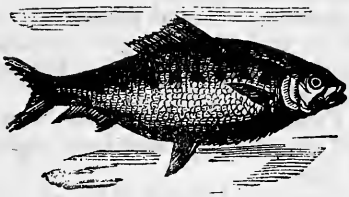
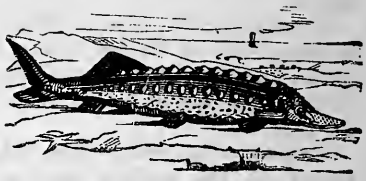
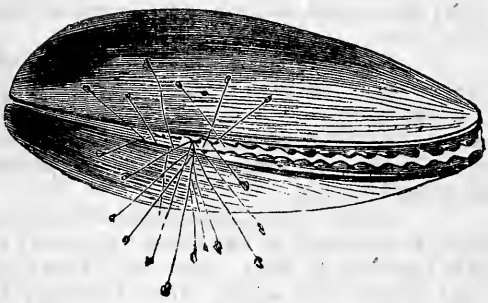


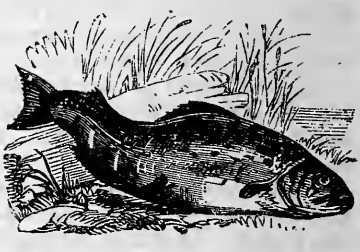
Shad.



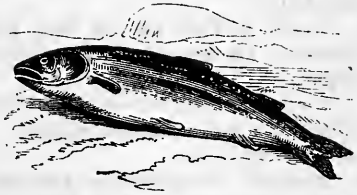
Sturgeon.



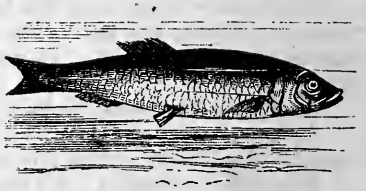
Mussel.



Trout.



Salmon.



Herring.

AMERICAN FISH.

To face p. 387.

XIX. SOMETHING FOR EVERYBODY.

The Principal Fish of America—where caught, and when in season.

Blackfish.—Caught off our whole coast. In season from May to September.

Bluefish (known also as Bluebass, and in the south as Taylor fish). Caught in the bays and harbours of the middle states. In season from June to November.

Catfish.—Caught in the lakes and rivers of the middle and southern states. In season all the year.

Cod.—Caught, banks of Newfoundland, New England, and New Jersey coast, &c. In season all the year.

Crabs.—Caught in the bays and harbours of the northern and middle states. In season all the year.

Clams.—The same places and seasons as oysters, which see.

Eels.—Caught in the northern and middle states, and some of the rivers and harbours of the south. In season all the year.

Flatfish and Flounders.—Caught in the harbours of the middle and northern states. In season during the fall and winter.

Greenturtle.—Caught on the coast of the West Indies and Florida. In season all the year.

Haddock.—Caught on the banks of Newfoundland, but not often further south than Nantuchet. In season all the year.

Halibut.—The same as haddock.

Herring.—Caught off the northern coast. In season during the winter.

Kingfish.—Caught off the whole coast. In season from May to October.

Lobsters.—Caught on the coast and bays and harbours of the northern and middle states. In season all the year.

Mackerel.—Caught from Cape May to Nova Scotia and Newfoundland. In season from the early spring to the last fall month.

Mussels.—Caught in bays and harbours. In season during the fall, winter, and spring.

Oysters.—Caught principally in the rivers and bays from Virginia northwards. In season during the months with an "r."

Pickerel.—Caught in northern lakes and rivers. In season from September to March.

Porgies.—Caught off the whole coast. In season from May to September.

Prawns and Shrimps.—Usually imported from Havana.

Salmon.—Caught in the rivers of Maine and Oregon. In season all the year.

Sea Bass.—Caught off the whole coast. In season from May to September.

Scollops.—Caught in bays and harbours. In season during the winter and spring.

Shad.—The Connecticut River shad is esteemed as the finest; the next in quality is that from the Delaware River. In season from February to July.

Sheepshead.—Caught in the bays and harbours of the middle and southern states. In season from May to September.

Smelt.—Caught in the northern rivers. In season from October to April.

Snapping Turtle.—Caught in waters of middle and southern states. In season all the year.

Spanish Mackerel.—Caught from Cape May to Boston Harbour. In season from June to September.

Soles.—None except imported. The importation is increasing.

Striped Bass.—Caught in all the bays and harbours. In season all the year, except June and July.

Sturgeon.—Caught in great abundance in the Hudson and other northern rivers. In season during the spring.

Terrapin.—Caught on the coast of middle and southern states. In season all the year.

Trout.—Caught in the small streams and lakes of the northern states. In season during the spring.

Turbot.—None except imported.

Whitefish.—Caught in the northern lakes and rivers. In season from September to March.

Yellow Perch.—Same as whitefish.

For methods of cooking each of these fish see Section II., on Domestic Cookery, and consult the index.

Bandages: How to Make and Apply them.

Bandages are strips of calico, linen, flannel, muslin, elastic webbing, bunting, or some other substance, of various lengths, such as three, four, eight, ten, or twelve yards, and one, one-and-a-half, two, two-and-a-half, three, four, or six inches wide, free from hems or darns, soft and unglazed. They are better after they have been washed. Their uses are to retain dressings, apparatus, or parts of the body in their proper positions, support the soft parts, and maintain equal pressure.

Bandages are Simple and Compound.—The former are simple slips rolled up tightly like a roll of ribbon. There is also another simple kind, which is rolled from both ends,—this is called a double-headed bandage. The compound bandages are formed of many pieces.

Bandages for the Head should be two inches wide, and five yards long; for the neck, two inches wide and three yards long; for the arm, two inches wide and seven yards long; for the leg, two inches-and-a-half wide and seven yards long; for the thigh, three inches wide and eight yards long; and for the body, four or six inches wide and ten or twelve yards long.

To apply a Single-Headed Bandage, lay the *outside of the end* next to the part to be bandaged, and hold the roll between the little, ring, and middle fingers, and the palm of the left hand, using the thumb and forefinger of the same hand to guide it, and the right hand to keep it firm, and pass the bandage partly round the leg towards the left hand. It is sometimes necessary to reverse this order, and therefore it is well to be able to use both hands. Particular parts require a different method of applying bandages, and therefore we shall describe the most useful separately; and there are different ways of putting on the same bandage, which consist in the manner the folds or turns are made. For example, the *circular* bandage is formed by horizontal turns, each of which overlaps the one made before it; the *spiral* consists of spiral turns; the *oblique* follows a course oblique or slanting to the centre of the limb; and the *recurrent* folds back again to the part whence it started.

Circular Bandages are used for the *neck,* to retain dressings on any part of it, or for blisters, setons, etc.; for the *head,* to keep dressings on the forehead, or any part contained within a circle passing round the head; for the *arm,* previous to bleeding; for the *leg,* above the knee; and for the *fingers,* etc.

To Confine the Ends of Bandages some persons use pins, others slit the end for a short distance, and tie the two strips into a knot, and some use a strip of adhesive plaster. Always place the point of a pin in such a position that it cannot prick the patient, or the person dressing the limb, or be liable to draw out by using the limb; therefore, as a general rule, turn the head of the pin from the free end of the bandage, or towards the upper part of the limb. The best mode is to *sew* the bandage on. A few stitches will hold it more securely than pins can.

The Oblique Bandage is generally used for arms and legs, to retain dressings.

The Spiral Bandage is generally applied to the trunk and extremities, but is apt to fall off even when very carefully applied; therefore we gene-

rally use another, called the recurrent, which folds back again.

The Recurrent Bandage is the best kind of bandage that we can employ for general purposes. The method of putting it on is as follows:—Apply the end of the bandage that is free, with the outside of it next the skin, and hold this end with the finger and thumb of the left hand, while some one supports the heel of the patient; then with the right hand pass the bandage over the piece you are holding, and keep it crossed thus until you can place your right forefinger upon the spot where it crosses the other bandage, where it must be kept firm. Now hold the roll of the bandage in your left hand, with the palm turned upwards, and *taking care to keep that part of the bandage between your right forefinger, and the roll in your left hand, quite slack;* turn your left hand over, and bring the bandage down upon the leg; then pass the roll under the leg towards your right hand, and repeat this until the leg is bandaged up to the knee, taking care *not to drag* the bandage at any time during the process of bandaging. When you arrive at the knee, pass the bandage round the leg in circles just below the knee, and pin it as usual. Bandaging is very easy, and if you once see any one apply a bandage properly, and attend to these rules, there will not be any difficulty; but bear one thing in mind, without which you will never put on a bandage even decently, and that is, *never to drag* or pull at a bandage, but make the turns while it is slack, and you have your right forefinger placed upon the point where it is to be folded down. When a limb is properly bandaged, the folds should run in a line corresponding to the shinbone. *Use*, to retain dressings, and for varicose veins.

A Bandage for the Chest is always placed upon the patient in a sitting posture; and it may be put on in circles, or spirally. *Use*, in fractures of the ribs, to retain dressings, and after severe contusions.

A Bandage for the Belly is placed on the patient as directed in the last, carrying it spirally from above downwards. *Use*, to compress the belly after dropsy, or retain dressings.

The Hand is Bandaged by crossing the bandage over the back of the hand. *Use*, to retain dressings.

For the Head, a bandage may be circular, or spiral, or both; in the latter case, commence by placing one circular turn just over the ears; then bring down from left to right, and round the head again, so as to alternate a spiral with a circular turn. *Use*, to retain dressings on the head, or over the eye; but this form soon gets slack. The circular bandage is the best, crossing it over both eyes.

For the Foot.—Place the end just above the outer ankle, and make two circular turns to prevent its slipping; then bring it down from the inside of the foot over the instep, towards the outer part; pass it under the sole of the foot, and upwards and inwards over the instep towards the inner ankle, then round the ankle and repeat again. *Use*, to retain dressings to the instep, heel, or ankle.

For the Leg and Foot, commence and proceed as directed in the preceding paragraph; then continue it up the leg, as ordered in the *Recurrent Bandage*.

As it sometimes happens that it is necessary to apply a bandage at once, and the materials are not at hand, it is desirable to know how to substitute something else *that any one may apply with ease.* This is found to be effected by handkerchiefs, and an experienced surgeon (Mr. Mayor) has paid great attention to this subject, and brought it to much perfection. It is to him, therefore, that we are indebted for most of these hints.

Any Ordinary Handkerchief will do; but a square of linen folded into various shapes answers better. The shapes generally required are as follows:—The triangle, the long square, the cravat, and the cord.

The Triangular Handkerchief is made by folding it from corner to corner. *Use*, as a bandage for the head. *Application.*—Place the base round the head, and the short part hanging down behind, then tie the long ends over it.

The Long Square is made by folding the handkerchief into three parts, by doubling it once upon itself. *Use*, as a bandage to the ribs, belly, etc. If one handkerchief is not long enough, sew two together.

The Cravat is folded as usual with cravats. *Use*, as a bandage for the head, arms, legs, feet, neck, etc.

The Cord is used to compress vessels, when a knot is made in it, and placed over the vessel to be compressed. It is merely a handkerchief twisted in its long diameter.

Two or more Handkerchiefs must sometimes be applied, as in a broken collar-bone, or when it is necessary to keep dressings under the arm. The bandage is applied by knotting the two ends of one handkerchief together, and passing the left arm through it, then passing another handkerchief under the right arm, and tying it. By this means we can brace the shoulders well back, and the handkerchief will press firmly over the broken collar-bone: besides, this form of bandage does not readily slip or get slack, but it requires to be combined with the sling, in order to keep the arm steady.

For an Inflamed Breast, that requires support, or dressings to be kept to it, tie two ends of the handkerchief round the neck, and bring the body of it over the breast, and pass it upwards and backwards under the arm of that side, and tie the ends around the neck.

An Excellent Sling is formed by placing one handkerchief around the neck, and knotting the two ends over the breast bone, then placing the other in triangle under the arm, to be supported with the base near to the hand; tie the ends over the handkerchief, and pin the top to the other part, after passing it around the elbow.

A Few Words on Fires.

How Fires break out.—Many of the conflagrations that occur are attributed to accident; but if the causes could always be known it would be discovered that nine-tenths of the number originate in carelessness and inattention, which, considering the fearful consequences of those calamities, are in the highest degree culpable. In workshops, such as those of the joiner and cabinet-maker, where combustible materials are strewed about in every direction, most disastrous results have frequently arisen from neglect of the most ordinary precautions. In such places, collections of wood-shavings left near a stove may, in the absence of the workmen, be set on fire by cinders falling on them; or a half-extinguished match thrown upon the floor may cause the shavings to smoulder, a sufficient draught of air being all that is required to kindle the fire into activity. Householders cannot be too careful that matches be cautiously used, that all fires should be safe and all lights extinguished at night, and no combustible substances permitted so near the stoves or grates as to be in danger.

Chimneys on Fire.—The most ready method of checking or extinguishing the fire is to stop the draught of air ascending from the fireplace. Throw some water on the fire, and fix tightly before the fireplace a piece of thick old carpeting soaked in water. The carpet thus thoroughly wet will be for the time almost impervious to air. If there be a damper in the chimney, let it first be closed. These methods will go far towards either putting out the fire, or reducing it to a *minimum*. A little flower of brimstone ought to be thrown on the fire in the grate before the wet carpet is applied; the brimstone fumes ascending the vent will help to extinguish the combustion.

Escape from Dwellings on Fire.—In these cases the unavoidable confusion and excitement tend to deprive people of the necessary presence of mind, and render them incapable of availing themselves of the means of safety.

We shall best consult the convenience of our readers by presenting them on this subject with the counsels of those who are the most qualified to impart them. Mr. Eyre M. Shaw, Captain of the London Fire Brigade, writes:—

"In case of fire, give the alarm at

once, and make every effort to escape and to save others by whatever mode of egress may be available; but in doing so remember to shut and keep shut all doors, windows, and apertures of every kind through which air can be admitted, thus checking the combustion and giving all concerned more time to get out, or, failing this, to come and show themselves at a front window or other prominent point accessible to our ladders. In short, all persons endangered should rely on their own resources during the first moments of an alarm, and after a period which they can calculate for themselves, according to the locality in which they live, they may expect an attendance of firemen with proper appliances, and the skill and energy to use them to the best advantage, regardless of all personal risks so long as there is a hope of saving life or property."

Dr. Andrew Wynter has published the following admirable "Directions for aiding persons to escape from premises on fire:—

"Be careful to acquaint yourself with the best means of exit from the house, both at the top and bottom.

"On the first alarm, reflect before you act. If in bed at the time, wrap yourself in a blanket or bed-side carpet; open no more doors or windows than are absolutely necessary, and shut every door after you.

"There is always from eight to twelve inches of pure air close to the ground; if you cannot therefore walk upright through the smoke, drop on your hands and knees and thus progress. A wetted silk handkerchief, a piece of flannel, or a worsted stocking, drawn over the face, permits breathing, and, to a great extent, excludes the smoke.

"If you can neither make your way upwards nor downwards, get into a front room; if there is a family, see that they are all collected here, and keep the door closed as much as possible, for remember that smoke always follows a draught, and fire always rushes after smoke

"On no account throw yourself, or allow others to throw themselves from the window. If no assistance is at hand, and you are in extremity, tie the sheets together, and, having fastened one end to some heavy piece of furniture, let down the women and children, one by one, by tying the end of the line of sheets round the waist, and lowering them through the window that is over the door, rather than through one that is over the area. You can easily let yourself down when the helpless are saved.

"If a woman's clothes should catch fire, let her instantly roll herself over and over on the ground; if a man be present, let him throw her down and do the like, and then wrap her in a rug, coat, or the first *woollen* thing that is at hand.

"Bystanders, the instant they see a fire, should run for the fire-escape, or to the police-station if that is nearer, where a 'jumping sheet' ought always to be found."

We entreat the attention of our readers to these important counsels, as they will be most useful in the event of fire breaking out. Every family should be supplied with one of the patent Fire Annihilators—an ingenious contrivance, which, by copiously discharging carbonic acid gas, will, if timely applied, extinguish combustion over a large surface in the course of a few seconds.

The Sewing Machine.

About the year 1840 a poor American mechanic, named Elias Howe, conceived the idea of making a machine, somewhat like the stocking frame, which should execute a kind of needlework suitable for most of those articles of dress and household use that had hitherto been solely accomplished by hand sewing. After many months of incessant labour, he succeeded in making a machine that would work satisfactorily, and obtained a patent for it in 1841. Not meeting with the success he expected at home, Howe determined to try his fortune in England. There again he was disappointed, and eventually sold his English patent for £250 ($1250)

and a royalty of £3 ($15) per machine to Mr. Thomas of London, who used it successfully in his own business of a stay maker.

Howe, on his return, found himself involved in a lawsuit with a firm who had pirated his patent, but he succeeded in establishing his right, and has lately died a wealthy man. Howe's machine worked what is called the Lock-stitch; but since his invention became known, many changes have been introduced by other manufacturers, so numerous that it would be quite impossible to speak of each in a book of this nature.

Sewing machines are manufactured for all purposes for which hand sewing was formerly employed, and they are made expressly suited for the work they are required to perform, which is as various as their sizes; for they are made so large that they can only be driven by steam power, and so small that one designated the "Fairy" looks like a child's toy, yet it executes its appointed task deftly and well. Sail-making, harness-making, boot and shoe making, are among the heaviest kinds of labour they are applied to, while the same or similar mechanism performs the most delicate embroidery, braiding, and a machine has even been invented to work button-holes.

The diversity of appearance and mode of operation in sewing machines is as great as the variety of their application, and the opinions as to their respective merits are as numerous as either; we will, therefore, endeavour to point out the most prominent points of difference in the several machines, and leave our readers to form their own conclusions.

Hand Machines.—These are much cheaper than the foot or treadle machines. The majority of them form what is called the chain-stitch, and which makes a ridge on the wrong side, similar in appearance to the old-fashioned tambour stitch; this is supposed to be less durable than a lock-stitch, and to give way readily if the thread be improperly fastened; our own experience is, that if carefully done with a good machine, strong fine thread, and a small, neat stitch, the work will be found sufficiently strong for the ordinary purposes of making ladies' and children's cotton and muslin under-clothing. There are a great many of the hand machines, differing from each other. Some hand machines make the lock-stitch, and many manufacturers of treadle machines have a hand machine of similar construction.

The Treadle Machines. — The *Wheeler and Wilson* machine has long been known to the public. It differs from most others, not only in the mode of performing the stitch, but in the position of the work, which passes from left to right along the stand, instead of passing from the worker across the left side of the stand. This machine forms a lock-stitch with two threads, the upper one taken from an ordinary reel, and the lower wound on a small metal bobbin inside a revolving hook, which locks one thread into the other, forming a stitch the same on both sides of the cloth. This machine is said to be well suited for dress and mantle, as well as shirt makers, by whom it is much used. Wheeler and Wilson also manufacture a hand machine, and one for making button-holes.

The Wilcox and Gibbs machine makes a stitch peculiar to itself, which is called after the name of the inventor; these machines, both hand and treadle, work with one thread only; they are easy to move, and very expeditious, as well as neat in the work they turn out; they seem simple in their mechanism, and peculiarly noiseless.

Howe's original machine formed a lock-stitch with two threads, the upper one taken from the common reel, and the under one from a small steel reel fastened inside a steel shuttle; this mode of forming the stitch is still used in the Thomas, Singer, Simpson, Florence, Wanzer, and some others. The shuttle stitch is similar in appearance on both sides of the work. The machines using it are heavier and more noisy than the Wheeler and

Wilson, but they are admirably suited for heavy work, and for manufacturing purposes.

The Grover and Baker machines work with two needles and two threads, which form a ridge on the underside of the cloth; the stitch is particularly elastic.

Hints on Choosing a Machine.—If expense is no object, and the intended purchaser is able to work a treadle machine, it is certainly the best, whether a double or single thread machine, and will be found the cheapest in the end. To ascertain the kind of machine most suited to the work which it is intended to perform, it is well to visit the sale-rooms of the principal manufacturers, where the attendants are always willing to afford every information, and to permit purchasers to see if they can make a successful attempt at using the machine. Choose one that seems easy to learn and easy to work, as well as simple in the mode of changing the needle, cotton, &c. Endeavour to take out and reset the needle. Change the cotton. Alter the length of stitch and the tension. Instructions are generally given in the way of using the machine free of charge, and it is well to try several machines before deciding on the final purchase.

Some makers hire out their machines, allowing the user the option of purchasing afterwards; others arrange for monthly payments. A mahogany or walnut stand with a cover is very convenient, as dust is most injurious to sewing machines.

Hints on the Management of Chickens.

"In May, chickens thrive all day."

May is the month for chickens, although it is true that many thousands have been hatched in the earlier months.

The weather begins to be warm, and the young chickens which have been hatched during March and April are usually the strongest and best, particularly if of choice kinds and intended for exhibition. Opinions vary with respect to the treatment of young chickens, but we shall give a few directions suggested by one who has had a long and profitable experience in rearing all kinds of poultry, both for exhibition and the table.

After emerging from the Shell the chickens should not be removed from under the hen; they are at first weakly and wet, but in a few hours they become thoroughly dry, and it is not until their little quaint heads peep from under the feathers of the hen that she should be removed from the nest. Many persons imagine that the chickens require feeding as soon as hatched; this is an error. At the time of hatching, the remains of the yolk are drawn into the digestive canal of the chick, and constitute its first food; this will last it from twenty to thirty hours, and then the chickens are strong and active on the legs, and ready to eat with avidity.

As regards the first food for the young birds, there is nothing approaching in value to a mixture of equal parts of grated bread, yolk of hard-boiled eggs, and oatmeal, slightly moistened with water. This is the best food for the first fortnight; then add gradually to it groats, hemp seed, and green food, such as cress, lettuce, cabbage, and leeks, chopped fine. If the weather is cold and wet, add a little powdered pimento to the food occasionally, also a little finely minced meat as a substitute for worms and insects, fresh curd, and hard-boiled eggs, mashed up with the shells. Feed the chickens early in the morning, and often during the day, giving but little at a time; the water vessels should be shallow and frequently refilled, and so arranged that the chickens cannot get into them. Throw the food on the ground to the chickens; they will then pick up gravel along with it, which is necessary for the digestion of their food. Of course there is not so much necessity for a substitute for the natural animal food when the hens have a free range, and can scratch for worms and insects for the brood. Chickens sometimes will not get their feathers properly; this may arise either from the cold of the weather or

from delicacy. In either case they should be highly fed; bread soaked in ale, or even in wine, may be necessary, and a plentiful supply of burned and crushed oyster shells to provide them with lime.

It is important that a hen with chickens should be very well fed. As Cobbett used to remark, "If she does not give milk, she gives heat;" and practical experience, as well as theory, proves that animal heat requires food for its maintenance. A hen with chickens, if poorly fed, drags her progeny about in search of food, taking them through the wet grass, and wearying them with over-exertion; but if well fed, she broods them carefully, and only scratches to supply them with grubs and dainty animal food. Both hen and chickens must be carefully and warmly housed at night, and never allowed out until the dew is quite off the grass. (*For other hints see p.* 289.)

Population in Millions, of the Principal Countries of the World.

	Millions.
United States of America	38½
Great Britain and Ireland (p. 242)	31½
France	38
Germany (North German States)	29½
,, (South German States)	9
Russia	77
Austria (Austro-Hungarian Empire	36
Italy	26
Spain	21
Portugal	4½
Belgium	5
Holland	3½
Denmark	1¾
Sweden and Norway (Scandinavia)	6
Switzerland	2¼
Greece	1½
Turkey (the Ottoman Empire)	42
Egypt	6
Brazil	11¾
Chili	2
Ecuador	1
Paraguay	1½
Persia	4½
China	400

(For Languages of the World, see p. 243.)

The French Metrical System.

As the French measures known as the Metric System are employed in many scientific books, and are coming more and more into use in this country, and will probably constitute the basis of an international system of weights and measures, we give here the whole of the French tables and full rules for the mutual conversion of our own and French weights and measures.

The Mètre is the chief unit for measures of Length.

The Are is the chief unit for measures of Surface.

The Stère is the chief unit for measures of Solidity.

The Litre is the chief unit for measures of Capacity.

The Gramme is the chief unit for measures of Weight.

The Franc is the chief unit for measures of Money.

The Mètre is the ten-millionth part of the quarter of the meridian.

The Are is a square having each of its sides equal to ten mètres.

The Stère is a cubic mètre.

The Litre is the cube of the tenth part of the mètre. There are 1000 litres in a cubic mètre.

The Gramme is the weight of distilled water contained in a cube, the side of which measures one-hundredth part of a mètre. A litre of water weighs therefore 1000 grammes, and a cubic mètre of water, which is equal to 1000 litres, weighs 1,000,000 grammes.

The Franc ($\frac{9}{10}$ silver and $\frac{1}{10}$ copper) weighs five grammes.

In forming multiples and sub-multiples (or subdivisions) of the principal units, use is made of the following prefixes:—

Déca	= 10 times the chief unit.
Hecto	= 100 ,,
Kilo	= 1,000 ,,
Myria	= 10,000 ,,
Deci	= 10th part of the chief unit.
Centi	= 100th ,,
Milli	= 1000th ,,

Long Measure.

10 millimètres (millim.) make 1 centimètre (centim.)
10 centimètres ,, 1 décimètre (decim.)
10 décimètres ,, 1 mètre (m.)
10 mètres ,, 1 décamètre (decam.)
10 décamètres ,, 1 hectomètre (hectom.)
10 hectomètres ,, 1 kilomètre (kilom.)
10 kilomètres ,, 1 myriamètre (myriam.)

The abbreviations used im calculation are placed after the units; they are used thus, 25 metres=25m.

Distances under 1000 mètres are usually expressed in mètres; over 1000 metres in kilomètres; and over 10,000 mètres in myriamètres. Thus 4 hectomètres 6 decamètres 3 mètres is expressed as 463 mètres; and 49,823 mètres is read 49 kilomètres 823 mètres; and 378,582 mètres as 37 myriamètres 8 kilomètres 582 mètres.

The myriamètre and kilomètre are termed itinerary measures.

Square or Surface Measure.

100 square millimètres (sq. millim.) make 1 square centimètre (sq. centim.)
100 ,, centimètres ,, 1 ,, décimètre (sq. decim.)
100 ,, décimètres ,, 1 ,, mètre (sq. m.)
100 ,, mètres ,, 1 ,, décamètre (sq. decam.)
100 ,, décamètres ,, 1 ,, hectomètre (sq. hectom.)
100 ,, hectomètres ,, 1 ,, kilomètre (sq. kilom.)
100 ,, kilomètres ,, 1 ,, myriamètre (sq. myriam.)

The sizes of rooms, tables, doors, windows, etc., are estimated in square mètres and its multiples.

The subdivisions serve to measure small surfaces, as the leaf of a book, the size of drawing paper, the surface of a brick, etc.

Square mètres are marked in calculation, thus, 904 sq. m. (904 square mètres).

Land or Surface Measure.

The only units used in measuring land are the Centiare, Are, and Hectare.

100 centiares make 1 are (a.)
100 ares ,, 1 hectare (hecta.)

The surfaces of fields, gardens, forests, &c., are estimated in ares and hectares.

A letter a. indicates ares in calculation: 54a.=54 ares.

The centiare is the square of the mètre.
The are ,, décamètre=100 square mètres.
The hectare ,, hectomètre=10,000 square metres.

The size of a country is valued in square kilomètres, or in sq. myriamètres.

1 square kilomètre =10,000 ares.
1 ,, myriamètre =1,000,000 ares.

Measure of Volume.

1000 cubic millimètres (c. millim.) make 1 cubic centimètre (c. centim.)
1000 ,, centimètres ,, 1 ,, décimètre (c. decim.)
1000 ,, décimètres ,, 1 ,, mètre (c. m.)
1000 ,, mètres ,, 1 ,, décamètre (c. decam.)
1000 ,, décamètres ,, 1 ,, hectomètre (c. hectom.)
1000 ,, hectomètres ,, 1 ,, kilomètre (c. kilom.)

The above table is used in estimating the volume of a room, works of masonry, or earth-work; blocks of marble, large building stones, lime, cement, sand, gravel, &c. The measure 57 cubic décimètres is written 57 c. decim.; 304 cubic mètres as 304 c. m.; 210 cubic décamètres as 210 c. decam.

Measure of Volume for Wood.

10 décistères make 1 stère (st.)
10 stères „ 1 décastère (decast.)

1 décistère = 100 cubic décimètres.
1 stère = 1 c. mètre = 1000 c decim.
1 décastère = 10 c. mètres = 10,000 c. décim.

The stère is a square upright wooden frame, the sides measuring 1 mètre each. Firewood is measured by cutting it in pieces of 1 mètre long, and placing within the frame. It is, however, common to sell wood by weight of 100, 200, 300, 400, &c., kilogrammes.

The term stère is abbreviated into st., thus 95st. (95 stères).

Measure of Capacity.

10 centilitres (centil.) make 1 décilitre (decil.)
10 décilitres „ 1 litre (l.)
10 litres „ 1 décalitre (decal.)
10 décalitres „ 1 hectolitre (hectol.)
10 hectolitres „ 1 kilolitre (kilol.)

1 millilitre = 1 c. centim.
1 centilitre = 10 c. centim.
1 décilitre = 100 c. centim.
1 litre = 1 c. décim. = 1000 centim.
1 décalitre = 10 c. decim. = 10,000 c. centim.
1 hectolitre = 100 c. decim. = 100,000 c. centim.
1 kilolitre = 1 c. mètre = 1000 c. decim. = 1,000,000 c. centim.

Weight.

10 milligrammes (millig.) make 1 centigramme (centig.)
10 centigrammes „ 1 décigramme (decig.)
10 décigrammes „ 1 gramme (g.)
10 grammes „ 1 décagramme (decag.)
10 décagrammes „ 1 hectogramme (hectog.)
10 hectogrammes „ 1 kilogramme (kilog.)

Weights over 1 kilog. are termed large weights; between the kilog. and gramme, medium weights; and below the gramme, small weights. The small weights are used by chemists, assayers, and goldsmiths. They are made of silver, platinum, or brass. The medium weights are made of brass, usually in the form of a cylinder, the height and diameter being equal; a button or knob at the top of each serves for lifting. The large weights are made of iron, in the shape of the lower half of a six-sided pyramid, except the two largest which have only four sides. A ring is attached to each for lifting.

The term metric quintal, or metric hundredweight, is used to denote 100 kilog. The tonne or tonneau is 1000 kilog., the weight of a cubic mètre of water.

List of Measures in use in France.

Length.

The measures of length used in the arts and trades are of many different forms and made from a variety of materials. A few examples are given. Drapers use the mètre in wood, divided into décimètres and centimètres. Carpenters make use of the double décimètre in boxwood, divided into centimètres and millimètres. Land surveyors use a chain composed of 50 links of 2 décimètres each. Engineers and architects make use of a flexible steel band (measuring 1 décamètre), capable of being rolled into a compact spiral

form when not in use. In addition there are tape measures of 1, 5, 10, or 100 mètres, variously subdivided.

Capacity.

For Liquids.—(A) In pewter (form cylindrical, the interior height being double the diameter). The double-litre (2 litres), the litre, the half-litre (5 décilitres), the double décilitre (2 decilitres), the décilitre, the half-décilitre, (5 centilitres), the double centilitre (2 centilitres), and the centilitre,—in all 8 measures.

(B) In tin (form cylindrical, interior height=diameter). The double litre, the litre, the half-litre, the double-décilitre, the décilitre, the half-décilitre, —6 measures.

For Grain.—Form cylindrical, interior height=diameter made in wood. Double-décalitre (2 décalitres or 20 litres), décalitre, the half décalitre (5 litres), the double-litre, the litre, the half-litre, the double-décilitre, the décilitre, and the half-décilitre (5 décilitres)—9 measures.

Weights used in France.

I. In iron.—50 kilogrammes (not often used, being too heavy to lift easily), 20 kilogrammes, 10 kilogrammes, 5 kilogrammes, 2 kilogrammes, 1 kilogramme, half-kilogramme (500 grammes), double hectogramme (200 grammes), one hectogramme, half-hectogramme (50 grammes).

II. In brass: (A) Cylindrical form. 1 double kilogramme, 1 kilogramme, half-kilogramme, double-hectogramme, 1 hectogramme, half-hectogramme, double-décagramme, décagramme, half-décagramme, double-gramme, 1 gramme.

(B) In the form of cups (fitting, when not used, one within the other). 1 kilogramme, 500 grammes, 200 grammes, 100 grammes, 50 grammes, 20 grammes, 10 grammes, 5 grammes, 2 grammes, 1 gramme.

III. In platinum, silver, or brass (in the form of little plates of metal). 5 décigrammes, 2 décigrammes, 1 décigramme, 5 centigrammes, 2 centigrammes, 1 centigramme, 5 milligrammes, 2 milligrammes, 1 milligramme.

German Pastes for Birds.—Cheap and simple food in the form of paste may be made in the following manner: —Take a white loaf which is well baked and stale, put it into fresh water till it is quite soaked through; then squeeze out the water, and pour boiled milk over the loaf, adding about two-thirds the quantity of barley meal from which the bran has been carefully sifted, or, what is still better, wheat-meal. Another method, however, may be adopted. Grate a carrot very nicely, soak a small white loaf in fresh water, press the water out of it, put it along with the carrot into an earthen pan, add handfuls of barley or wheaten meal, and mix the whole together with a pestle. These pastes ought to be made fresh every morning, for they quickly become sour, and are consequently injurious to the birds. A feeding trough ought to be used, in which the paste can be put; and this vessel will be more suitable if made of tin, earthenware, china, or glass, rather than of wood, as it can be more readily kept perfectly sweet and clean, and will therefore be less liable to cause the food placed in it to become sour or stale.

Sunstroke.—Attacks of sunstroke are not often met with outside the tropical regions, but lately in America, owing to the great heat which has recently prevailed, there have been man fatal cases.

Sunstroke generally follows from direct exposure to the vertical rays of the sun, and persons are more liable to attacks when in a weak and exhausted state.

The attack begins with a feeling of faintness, great heat and dryness of the skin, with intense thirst; vomiting frequently occurs, there is loss of speech, and the patient becomes insensible.

Marks used by Printers and Writers in Correcting Proof-sheets.—Certain marks and signs, employed by all printers, will be easily understood by an examination of the following example:—

Antiquity, like every other quality that attracts the notice of mankind, has undoubtedly votaries that reverence it, not from reason, but from prejudice. some seem to admire indiscriminately whatever has been long preserved, without considering that time has sometimes co-operated with chance: all perhaps are more willing to honour present than past excellence; and the ~~the~~ mind contemplates genius through the shades of age, as the eye ~~views~~ the sun through artificial opacity. the great contention of criticism is to find the faults of the moderns, the beauties of the ancients.

While an autor is yet living, we estimate his powers by his worst performances; and when he is dead, To works, however, of which the excellence is not gradual but absolute and definite and comparative; to works, raised not upon principles demonstrative ~~and scientifick~~, but appealing wholly to observation and experience, no other test can be applied than length of duration and continuance of esteem.

we rate them by his best.

Explanation of the Marks.—1. Where a word is to be changed from small letters to capitals, draw three lines under it, and write *caps.* in the margin.

2. Draw the pen through a wrong letter, and make the right one opposite in the margin.

3. A letter turned upside down.

4. The substitution of a comma for another point, or for a letter put in by mistake.

5. The insertion of a hyphen.

6. To put the letters of a word that stand apart close together.

7. To take away a superfluous letter or word, the pen is struck through it, and a round-top *d* made opposite, being the contraction of the Latin *delete*, to expunge.

8. Where a word has to be changed to italic, draw a line under it, and write *ital.* in the margin; and where a word has to be changed from italic to roman, write *rom.* opposite.

9. When words are to be transposed three ways of marking them are shown; but they are not usually numbered except more than three words have their order changed.

10. The transposition of letters in a word.

11. To change one word for another.

12. The substitution of a period or a colon for any other point. It is customary to encircle colon and full-point marks.

13. Substitution of a capital for a small letter.

14. Insertion of a word, or a letter.

15. When a paragraph commences where it is not intended, connect the matter by a line, and write in the margin opposite *run on.*

16. Where a space or a quadrat stands up and appears, draw a line under it, and make a strong perpendicular line in the margin.

17. When a letter of a different size to that used, or of a different face, appears in a word, draw a line either through it or under it, and write opposite *w.f.*, f r wrong font.

18. The marks for a paragraph, when its commencement has been omitted.

19. When one or more words have been struck out, and it is subsequently decided that they shall remain, make dots under them, and write the word *stet* (let it stand) in the margin.

20. Mark for a space where it has been omitted between two words.

21. To change a word from small letters to small capitals, make two lines under the word, and write *sm caps* opposite. To change a word from small capitals to small letters, make one line under the word, and write in the margin *l. c.* for lower case.

22. Mark for the apostrophe, and also the marks for turned commas, which show extracts.

23. Manner of marking an omission or insertion, when it is too long to be written in the side margin. It may be written either at the top or the bottom of the page.

24. Marks when lines or words do not appear straight.

When corrected, the extract would read thus:—

"ANTIQUITY, like every other quality that attracts the notice of mankind, has undoubtedly votaries that *reverence* it, not from reason, but from prejudice. Some seem to admire indiscriminately whatever has been long preserved, without considering that time has sometimes co-operated with chance: all perhaps are more willing to honour past than present excellence; and the mind contemplates genius through the shades of age, as the eye surveys the sun through artificial opacity. The great contention of criticism is to find the faults of the moderns, and the beauties of the ancients. While an author is yet living, we estimate his powers by his worst performances; and when he is dead, we rate them by his best.

"To works, however, of which the excellence is not absolute and definite, but gradual and comparative; to works, not raised upon principles demonstrative and scientifick, but appealing wholly to observation and experience, no other test can be applied than LENGTH of duration and continuance of esteem."

To Prevent the Hair falling off.—Mix together, and use twice a week—One oz. castor oil, one oz. salad oil, one oz. almond oil, one drachm of oil of rosemary, two pennyworth of tincture of cantharides. Be careful in using the last.

Grebe may be washed with white soap and water, and shaken gently until dry.

Bread made with Sea-water increases the appetite and stimulates digestion; it is pleasant to eat, and exercises a beneficial medicinal influence in cases of dyspepsia, phthisis, and scrofula; it has also been found conducive to health on board ship during long voyages.

Hair-brushes, with Ivory or Tortoise-shell Backs, to Clean.—Dissolve a small handful of common soda in a *spouted* basin filled to the brim with hot water; then hold the brush, with the handle in the spout of the basin, in such a manner that the hairs or bristles shall be thoroughly immersed, but no portion of the frame. Keep it a moment or two in this position, then remove, and place instantly under a stream of cold water (from a jug or tap), which hardens the bristles. Dry in a soft napless cloth, and polish the ornamented back with a little flour and an old silk handkerchief.

Mosquitoes, to Expel.—Take of gum camphor a piece about one-third the size of an egg, and evaporate it by placing it in a tin vessel, and holding it over a lamp or candle, taking care that it does not ignite. The smoke will soon fill the room and expel the mosquitoes.

Insect Bites, Remedy for.—When a mosquito, flea, gnat, or other noxious insect punctures the human skin, it deposits an atom of an acidulous fluid of a poisonous nature. This causes a sensation of tickling, itching, or pain. The best remedies for the sting of insects are those which will instantly neutralise this acidulous poison. These are either ammonia or borax. Borax is a salt of that innocent nature that it may be kept in every household; it can be recommended as a domestic and harmless chemical.

Ink or Fruit Stains on the Hands, to Remove.—Add to a teacupful of cold water a quarter of a wineglassful of nitric acid (*aqua-fortis*); pour a little into the palm of the hand, and quickly rub them together (or dip the fingertips into the fluid). When the stains turn from black to red, wash the hands, as usual, in moderately warm water. The above mixture, if kept in a stoppered bottle, may be often used.

Horn, to Soften.—To one pound of wood-ashes, add two pounds of quicklime; put them in a quart of water. Let the whole boil till reduced to one-third; then dip a feather in, and, if on drawing it out, the plume should come off, it is a proof that it has boiled enough; if not, let it boil a little

longer. When it is settled, filter it off, and in the liquor thus strained put shavings of horn. Let them soak for three days; and, first anointing your hands with oil, work the horn into a mass, and print or mould it into any shape you please.

Horn Mouids.—If you wish to take the impression of any coin, medal, &c., previously anoint it with oil, and lay the horn shavings over it in its softened state. When dry, the impression will be sunk into the horn; and this will serve as a mould to reproduce, either by plaster of Paris, putty, and glue, or isinglass and ground eggshells, the exact resemblance of the coin or medal.

Patent Leather Boots, to Clean.—Washing patent leather boots with milk is waste of time. If they crack, brush a little blacking into the cracks, and then rub them over with French polish or common furniture polish, using the finger to lay on the polish, and a soft dry rag to finish off with. In lieu of furniture polish, a mixture of sweet oil and turpentine will answer. This treatment will preserve their bright polish until they are utterly worn out.

Insects in Rooms.—A little carbolic acid in the paste and whitewash, will prevent the annoyance of insects and the sour smells frequently experienced in rooms newly papered and whitened.

Excellent Lotion for Nervous Headaches.—Mix a wineglassful of water with a tablespoonful of toilet vinegar, and a tablespoonful of brandy; sponge the parts affected two or three times a day.

Safety during Thunderstorms.

A correspondent has suggested to us that it might be useful to afford our readers some information on this subject, pointing out especially places and things to be avoided, and precautions to be taken, so as to insure, as far as possible, personal security. We shall therefore quote the inquiries which our correspondent makes, and reply to them in the order in which they occur in his note; believing that the discussion will not be without its interest to a large number of our intelligent readers. Prior, however, to giving our replies to the questions we refer to, we think it may conduce to the greater clearness of those, if, avoiding technicalities as much as possible, we preface what we have to say with a short statement as to electricity in the condition familiarly known as lightning.

It has been established by numerous experiments, that the electricity developed by means of an electric machine is identical with the electricity in the earth and the atmosphere, and that the spark artificially produced is identical, however comparatively minute, with the phenomenon we call lightning, and that both are governed by exactly the same natural laws. It is found that if the conductor of an electric machine be insulated, that is to say, placed on some nonconducting substance, and then put into a negative condition, by being connected with the negative side of the electric machine, it will, because of that condition, receive electricity in the form of a spark, provided that some conducting substance in contact with the source of positive electricity be near enough to allow the spark to pass, that is to say, within what is called "striking distance." In this case the spark would pass into the conductor till an equilibrium took place, and the conductor, which we have supposed to be negative, was no longer in that condition, but possessed the same amount of latent electricity as surrounding objects. Now if a cloud be in a negative state, and insulated by being surrounded with dry air, it is like the supposed negative conductor,—in a condition to receive a spark from the earth; on the other hand, if the earth be negative, it is in a condition to receive a supply of electrity from a cloud; all that is requisite in either case being that there shall exist some conducting medium between the cloud and the earth, or that the two objects shall be sufficiently near each other to be within "striking distance;" in which case the spark or lightning will pass from one object to the other till the equilibrium

is restored. Lightning, therefore, passes not only from the clouds to the earth, but from the earth to the clouds; in either instance taking its course through the best conductor that happens to be next the point where the tension or accumulation of electricity is greatest.

This brief statement is requisite in order to avoid repetition in replying to the questions we refer to, and because these imply that lightning proceeds only from the clouds. We shall now state the inquiries made, and furnish brief answers, taking them in the order in which they occur: —

I. Q. "Is it best to open doors and windows, or to shut them? Some persons open all doors and windows, to allow the electric fluid a free passage, others shut all doors and windows, to keep it out of the house."

I. A. Whether the house be at the point where the electricity takes its departure to the clouds, or at that at which the electricity from the clouds enters the earth, the fluid is not deflected from its course by the circumstance of a door or window being shut or open. Even if the door were composed of solid iron, it would no more interpose a barrier to the passage of the electric agent, than if it were wide open.

II. Q. "Is it safe to sit near a window or near the fireplace?"

II. A. The window is not only as safe, but probably more safe than some other parts of the house. It is, however, less safe to sit near the fireplace. The chimney being the most prominent part of the house, is the point generally on which the lightning strikes, or by which it quits the earth. The grate, fender, and fireirons, and even the smoke in the chimney, may act in some slight degree as conductors, and if the chimney be the course down or up which the electricity passes, immediate proximity to it might involve injury, not so much from the direct stroke of the lightning, as from its indirect effects.

III. Q. "If in bed, is it safer to remain there, or to get up and go below stairs?"

III. A. If the bed be as far as any other part of the room from the fireplace or its metallic furniture, it would probably be safer to remain in it during the storm. As to going downstairs, it has been recommended by some persons that a cellar, being below the surface of the earth, is the safest place of refuge, on the supposition that coming from the clouds the electricity would first expend itself on the surface of the earth, before touching things below it; this, however, is a popular error. As already mentioned, the lightning rises out of the earth as well as proceeds from the clouds; the cellar, therefore, or the ground floor, may accordingly, in some cases, be nearer the point at which the electricity ascends; and the effects are as violent at the place from which the electricity takes its departure, as at the place which it strikes on its arrival at the earth.

IV. Q. "Are looking glasses in front of a window dangerous? Do they attract the lightning if the window is shut?"

IV. A. Looking-glasses are in no way the cause of danger, and certainly do not attract the lightning, whether the window be closed or open. The amalgam at the back of a mirror, it is true, is a metallic substance; but it is too slight to be taken into account.

V. Q. "Are persons more secure lying down than standing erect?"

V. A. Lying down, as a general rule, is a safer position than an upright attitude, as will be seen from the following few remarks as to safety out of doors, subjoined to the necessarily very short replies as to security inside the house.

The same reason why proximity to the chimney and its iron or brass furniture is less safe than other places, is that which renders the immediate neighbourhood of trees out of doors insecure. The chimney and the tree are prominent objects, and act as conductors for the fluid. The tree is considerably more dangerous than the chimney, because it is so much higher and because its upper branches are all of them so many additional conductors. Moreover, the moist wood of a tree is

a better conductor than the smoke of a chimney, or the chimney itself. Further, the tallest and largest trees are much less safe than such as are low and small; and, as people are naturally apt to take shelter from the rain during a thunderstorm under the largest and most umbrageous trees, it is found to be under such, chiefly, that they are struck with lightning.

To stand during a thunderstorm on high ground, where there are no large trees to act as conductors, is likewise unsafe. The human body is itself a good conductor, and by standing upright the danger is increased: a person in that attitude on elevated ground, may be higher than a very tall tree lower down, and may, on that account, form the very point on which the electricity strikes. If caught by a thunderstorm on elevated ground, the safest course, however inconvenient, is to lie down, instead of maintaining an erect posture, and thereby furnishing the electricity with a point on which to strike.

To Collect and Preserve Specimens of Plants.—To form what is called the *hortus siccus* or *herbarium*, various methods are employed, but the following is recommended as the most simple.

The articles requisite for the purpose consist of a dozen quires of smooth soft paper of a large size, six boards of about an inch in thickness, and four iron or lead weights, two of them about thirty pounds, and the two others about half that weight, and a botanical box of tin and of such dimensions as shall be most convenient for the collector.

The plants to be preserved ought, if possible, to be gathered in dry weather; but if the weather be wet, they ought to be laid out for some time on a table till partially dried, and when the roots are taken up along with the stems, they ought to be washed, and then exposed to the air for the same purpose.

To Preserve Plants.—Lay over one of the boards two or three sheets of the paper. On the uppermost sheet spread out the specimen to be preserved, unfolding its parts so as to give it as natural an appearance as possible, laying out the leaves and flowers with particular care. Over the specimen thus disposed of, place several sheets of paper; on the uppermost sheet then spread out another specimen, and so proceed till all the plants you intend to preserve are laid down; and, having put over the whole some more sheets of paper, place a board over them with the weights upon it, which may be a number of clean bricks, if the iron or lead weights cannot conveniently be procured.

As some plants are delicate and flexible, and others comparatively thick and hard, the former class will require less weight to be placed over them, and the latter considerably more. To preserve the colour of flowers when drying, the greatest care is required in changing the papers every second day, which papers first ought to be well dried at the fire. With regard to keeping the shape of flowers, the utmost care and attention is necessary when arranging them on the paper, and which can be done by having another piece of paper, and gently laying on part of the flower. The part of the flower so covered with the paper ought to have a small book placed on it. Then begin and lay out the other leaves of the flower, and also press it, and so on, until each part has had the gentle pressure necessary to keep it in position. Let them remain so for a short time, and then put some heavy weight on them: look at them next day, and change the damp paper. We have kept ferns for years quite fresh in colour by this simple mode of drying.

In three or four days the plants thus treated should be taken out, together with the paper in which they have been deposited, and laid in fresh paper with three or four sheets betwen every two plants, and the board and weights laid upon them as before. This process must be continued till the plants are perfectly dried. Each specimen is then to be placed on a sheet of dry paper, along with a memorandum of the name of the plant, the place and time at which it was

gathered, the character of the soil from which it was taken, and any other particulars tending to illustrate its character and history.

Presuming the process of drying to be satisfactorily carried out, the next business of the collector is the

Arrangement of his Specimens.—To this end he must procure a quantity of writing or printing paper of stout quality and large size, five or six sheets of which ought to be stitched into coloured covers. Let a sufficient quantity of large post writing-paper, cut into half-sheets of folio size, be in readiness. Each plant is then to be placed on one of these half-sheets, and fastened to it by means of slips of paper gummed across it in various places. On the top of the page the particulars contained in the memorandum already referred to should be written. The plants thus secured to the half-sheets must then be placed in the order required (either by the natural or artificial systems) within the leaves contained in the coloured covers; the size of each bundle of specimens rendering it convenient at any time for purposes of reference. Twelve of such parcels so contained in the same number of coloured covers can then be tied up in covers of stout pasteboard, and laid up in a cabinet or box suited to the purpose.

Another Method of drying plants before laying them aside, and arranging them in a systematic manner, may here be mentioned as worthy of attention. Get a shallow pan, or tray, about the size of the blotting-paper used for drying plants. Lay the plants in the usual way between the sheets of the blotting-paper, and when the tray or pan is nearly full, cover it over with a layer of dry sand half an inch thick or so, and place it on a fender before the fire, or on the hob, and in three hours the plants will be perfectly dried.

Washing and Wringing Machines.—These machines, which are now becoming very generally used, are of various forms and modes of construction, but the object in all is to remove grease and dirt from clothing with the least possible labour and the smallest amount of injury to the fabric, at the same time that the cleansing must be perfect. An equal amount of friction can be produced by the machine, and much hotter water used than any hand will bear. A considerably smaller quantity of soap is required, but boiling water is necessary to extract grease, as well as some soda or washing powder if the clothes be very much soiled.

Some washing machines are constructed on a principle similar to that of the old-fashioned dolly, which rubbed the clothes about in a common washing-tub. These machines have rollers or balls of wood, which are dashed about among the clothes by a wheel worked by a handle and fixed in a box, in which the linen, with soap and boiling water, is placed. In others, the clothes are lifted by ribs on a wheel, and allowed to fall back again into a box with ridges at equal distances, which rub the articles against each other, as well as against the wheel. Another machine has a cylinder formed of bars of wood, on which are placed brushes, which can be removed at pleasure. The linen is placed in this cylinder, and by a handle it is turned backwards and forwards alternately through the soap and water contained in the outer box, thus producing a certain amount of friction.

Perhaps the most complete machine is one which can both wash, wring, and mangle. The clothes are placed in a box, and rubbed against ribs on the inside of it at each turn of a wheel, which also changes the position of the clothes. The wringer forms a mangle, by having a hard board introduced below the rollers to make a table, on which to lay the linen. There is also a wringing machine with india-rubber rollers that can be fixed to any ordinary washing-tub; and a rinsing, bluing, and wringing trough, a most useful article, having two compartments, one each for clean and blue water, with a wringing machine fixed to it, and a cover, which forms a tray to lay the linen on when wrung.

By the help of these two machines one woman can perform nearly as much as four could by the old system; it is obvious, therefore, that there is a great saving both of time and trouble in using them, and we have the testimony of many heads of families where they have long been used, as to their efficiency in these points, as well as to the small amount of injury done to the clothing, particularly in the operation of wringing. The best and most favourite washing machines can be seen by calling upon any dealer in the city, who may have a stock on hand.

Hints on Washing.—The linen for Monday's wash should be collected on Saturday, sorted and put to soak in cold water according to the various kinds. The body linen should be put into one tub, the bed and table linen in other, and the fine things separately. Plain collars, cuffs, wristbands, should be strung through the button-holes on a piece of bobbin long enough to enable the articles to be easily divided for rubbing, starching, &c. Coloured muslins, prints, and flannels must be laid aside to be washed in a different manner from white calico or linen. Properly boiled suds are far better than soap for washing, particularly if a washing machine be employed. The suds should be prepared in the following manner:—Shred into an earthenware jar the best yellow soap cut into very fine shavings, and pour boiling water to the quantity required. One pound of soap is plenty for one gallon of water. Add to this quantity half a pound of the best washing soda, and set the jar (covered) on a stove or at the back of the kitchen range till the soap is quite dissolved. If this be done on Saturday evening, the soap will be a smooth jelly fit to use on Monday morning.

The body linen is the first that should go into the machine, after being well washed and rinsed in clean suds; if it requires boiling it should be put into the copper. Unless linen is very much soiled, it will not require boiling more than every second time it is washed. In a moderate sized copper put about two pints of the soap jelly already mentioned; fill it with cold water and put in the clothes; stir frequently to prevent them from burning, and only leave them in the copper ten minutes after the water begins to boil. Take them out, rinse them very well, and blue them. To blue them well use the best stone blue tied in a bag of thick flannel, do one article at a time, and avoid letting it fall to the bottom of the tub, as the blue falls to the bottom, and the linen is apt to be streaked and spotted with blue, which is very hard to get out.

Bed and table linen should be treated in a similar way. The Dutch and Belgian washerwomen, who get up linen beautifully, do not use soda, but borax, in the proportion of a handful of refined borax to about ten gallons of boiling water. They save nearly half the quantity of soap, and the borax does not injure in the least even fine lace or cambric.

Chloride of lime is the laundress's favourite chemical. She sees no reason why it should not clean all things equally well. And so it does—removing the colour as well as the dirt.

The French Method of Washing Coloured Muslins, Piqués, &c.—Prepare some rather warm (not hot) lather made with soft water and the best white soap; wash the dresses one at a time, but do not soak them. As soon as the first lather looks soiled squeeze the dress from it, and at once wash it again in a fresh lather. When thoroughly clean, rinse in pure cold water, lastly in water slightly blued; squeeze (not wring) the water completely from the dress, and hang it in a shaded place to dry; if wet weather dry it by the fire. The best prints will fade if hung in the sunshine.

In getting up muslins and piqués the failure is not generally in the washing, but in the starching. A good-sized panful of starch should be used, in which three or four inches of composite or other candle has been melted whilst hot. The articles should be thoroughly squeezed from the starch,

and folded whilst wet between folds of old sheeting or table linen. They should then be passed beneath the rollers of a mangle, or through a wringing machine. All lumps of starch are thus removed.

Piqués should be ironed as lightly as possible, and the iron ought never to come into contact with the outside surface of the *piqué*. An old cambric handkerchief is the best thing to use under the iron where absolutely necessary to iron on the right side.

To Wash a Lama Dress that has Bright or Delicate Colours.—Boil one pound of the best rice in one gallon of water for three hours. When boiled pour off what will be sufficient to starch the dress; wash the dress well in the remainder, rinse it in clean cold water, wring it well, then starch it with the rice water that was kept for that purpose, and hang it before the fire to dry. When dry enough iron with a cool iron, as it is liable to scorch. If some parts of the dress get too dry, they must be damped with a wet cloth whilst ironing. No soap must be used. The best way is to boil the rice on the previous day, and merely warm it up the next morning, for then you have the day before you to complete the whole, as the dress must on no account lie damp, even for an hour, or the colours will be sure to run. This receipt will be found equally well suited to delicate painted muslins and piqués as to lama and alpaca dresses.

To Wash Lace.—Cover an ordinary wine-bottle with fine flannel and stitch it firmly round the bottle, tack the outer edge of the lace to the flannel, rolling it smoothly round the bottle, then tack the inner edge smoothly down, cover over the lace with a piece of very fine flannel or muslin, rub the whole gently with clean suds made of the soap jelly already described (page 404). If the lace is very much discoloured, fill the bottle with hot water, and set it upright in a saucepan of suds, and let it boil for a few minutes, then place the bottle under a running tap to rinse the lace thoroughly; make some starch about as thick as arrowroot for an invalid, melt in it a small quantity of best white wax and a little loaf sugar. Plunge the bottle two or three times into this starch, pressing out the superfluous starch with the hand; then dip the bottle into cold water, remove the outer covering from the lace, fill the bottle with very hot water, and set it in the sun to dry the lace. When nearly dry, take it off the bottle carefully, pick it out with the fingers, and lay it in a cool place to dry.

To Wash Flannels or other Woollen Articles.—Have the suds ready prepared by boiling up some good soap in soft water with Manby's washing crystal, but do not use the suds when boiling; let them be as hot as the hand will bear when the articles are put in. The flannels should not be rubbed with soap, nor should the material itself be rubbed, as in washing linen, &c.; the fibres of the wool contain numberless little hooks, which the rubbing knots together; hence the thickening of the fabric and consequent shrinking in its dimensions. Sluice the articles up and down in plenty of suds, which afterwards squeeze (not wring) out. The clothes-wringers, already spoken of at some length (see page 403), are a great improvement upon hand labour, as, without injury to the fabric, they squeeze out the water so thoroughly that the article dries in considerable less time than it otherwise would do. After rinsing, squeeze out the water, and dry in the open air, if the weather is such as to admit of the articles drying quickly; if not, dry in a warm room, but avoid too close proximity to a fire. Let any dust or mud be beaten out or brushed off prior to washing. All flannels for shirts should be shrunk previously to making up, or they will speedily become too small.

Scotch Method of Washing Woollen Shawls.—Scrape one pound of soap, boil it down in sufficient water. When cooling, beat it with the hand; it will be a sort of jelly. Add three tablespoonfuls of spirit of turpentine and

one of spirit of hartshorn. Wash the articles thoroughly in it, then rinse in cold water until all the soap is taken off, then in salt and water. Fold between two sheets, taking care not to allow two folds of the article washed to lie together. Mangle, and iron with a very cool iron. Shawls done in this way look like new. Only use the salt where there are delicate colours that may strike.

To Wash Glass Decanters.—Soak the decanters for some hours in warm soda and water; if there is much cutting on the outside, a brush will be necessary to remove the dirt and stains from the crevices. Cut a potato into small dice, put a good handful of these into the decanter with some warm water, shake the decanter briskly until the stains disappear, rinse in clean cold water, and let them drain until dry. Vinegar and sauce cruets can be cleaned in the same way.

To Clean Glass Globes.—If the globes are much stained on the outside by smoke, soak them in tolerably hot water with a little washing soda dissolved in it, then put a teaspoonful of powdered ammonia into a pan of lukewarm water, and with a tolerably hard brush wash the globes till the smoke stain disappears, rinse in clean cold water, and let them drain till dry; they will be quite as white and clear as new globes.

How to Clean Burnished Steel Grates—Use only the finest emery powder to be had, and sweet oil on a piece of fine old flannel; rub the grate in always the same direction, not backwards and forwards; and then carefully polish it off with a soft clean wash leather.

Hints on Singing. — Before learning to sing, it will be necessary to decide, first, whether sufficient natural capacity exists; and second, whether the constitution is likely to suffer from the exercises necessary on the part of the aspirant to vocal proficiency. With regard to the first point, the existence or want of a "musical ear" (for all depends on that) may easily be discovered—in the case of an adult by any professional musician, and in the case of childhood even by the ordinary observer. A child who is accustomed to hum snatches of tunes he has heard, or who joins in the hymns of a place of worship, may generally be considered a promising subject for musical training, whether vocal or instrumental; for these involuntary attempts imply the possession, in more or less degree, of the following gifts: a musical ear, natural perception of melody and of rhythm (or time). When to these is added that of a good voice, nothing but proper training is requisite to form a good singer.

Is Singing Injurious?—This is an important question, but it may be answered emphatically in the negative, except in cases where disease of the lungs exist, for then it *is* undoubtedly unsafe, although not to the extent generally supposed. Medical opinion should be sought in case of doubt on this point. Singing should be encouraged from childhood, but any *severe* vocal practice is better deferred until after about the age of sixteen in both sexes, when the voice has thoroughly settled. This rule is, however, open to exceptions, and it applies more to males than females; indeed, during the time when the change takes place in the voices of boys they must entirely cease singing. A severe cold is in all cases a valid reason for avoiding any vocal exertion; but an occasional thickness of voice and phlegm in the throat should not be made an excuse for disobliging the friendly circle, or for shirking duties belonging to members of choirs or musical societies. In our variable climate these slight affections are so prevalent that it may be said that Americans always have colds. Singing too soon after a meal should be avoided. An hour should elapse after breakfast and luncheon, and two hours after dinner, before the voice is subject ed to exertion. Singers should endeavour to preserve their general health, for on this their success greatly depends.

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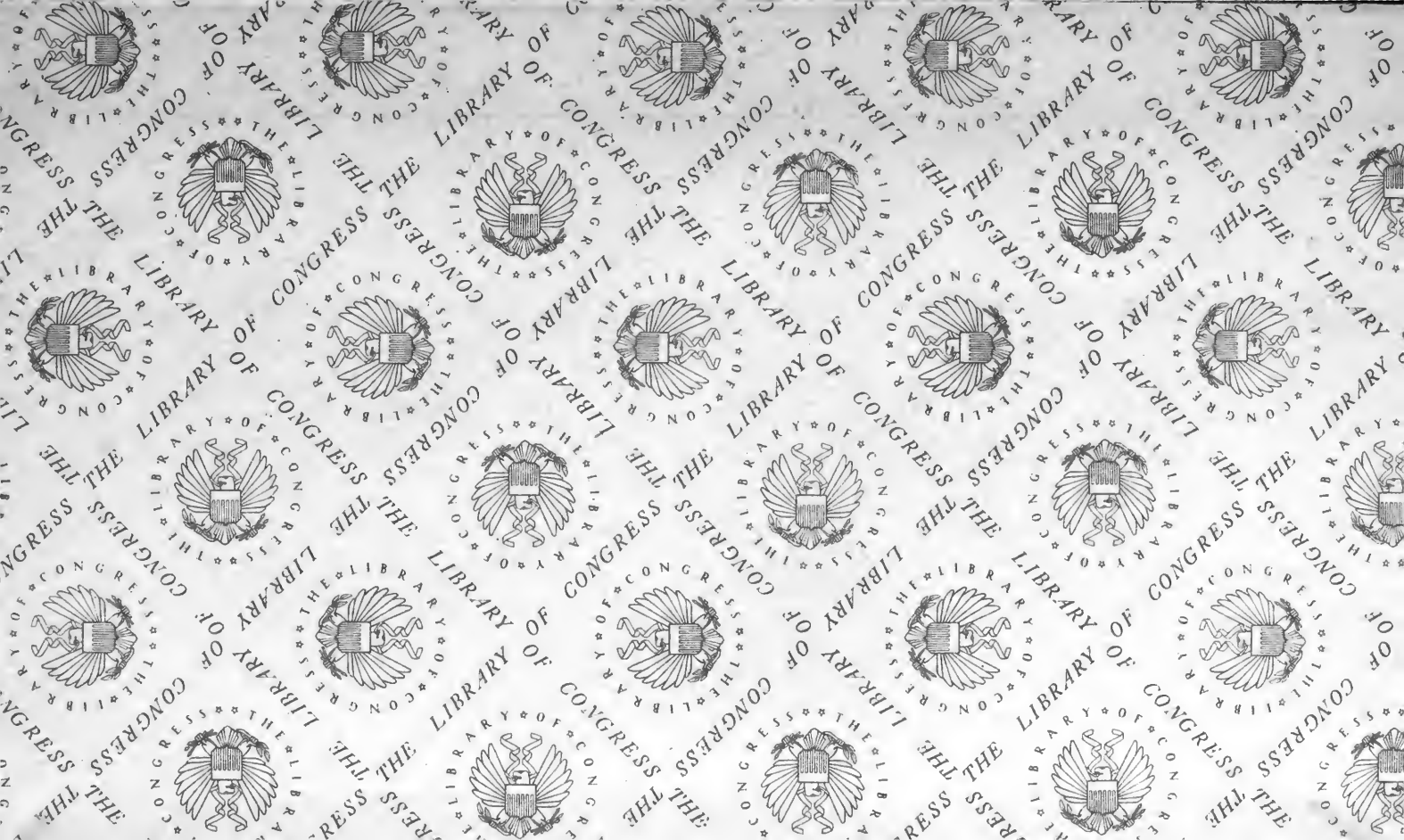
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